UNITED NUCLEAR CORPORATION

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Gallup, New Mexico 87305-3077

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40-8907

August 27, 2015
Mr. Andrew Persinko, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
#2 White Flint Mail Stop T7 E-18
Rockville, MD 20852-2738

RE: First Half –January thru June 2015
Semi – Annual Ground Water Monitoring Report.
QA/QC Report and Effluent and Environmental Monitoring Report.

Dear Mr. Persinko

The above reports are submitted pursuant to our NRC Source Materials License NO. SUA-1475. Condition 30C and 12: Section V.A. 15 of the EPA Administrative Order for the Church Rock Site.

Although not part of the performance monitoring program requirement Zone 3 wells PB-3, PB-4, NBL-2, RW-A, NW wells 1 thru 5, MW-6 and MW-7 are also included in this report.

If you have any questions or recommendations, please advise.

Sincerely,

Max Chischilly Jr.
Radiation Safety Officer

dy
Enclosures

Cc. Robert Warren, Chester Engineers
Steve Jetter, NMED
Freida White, NNEPA
Tom McLaughlin, NRC (3 Copies)
Janet Brooks, USEPA Region 6
Jack E. Whitten, NRC Region IV
Document Control Desk, NRC

NMSS 21

SEMI-ANNUAL GROUND WATER EFFLUENT AND ENVIRONMENTAL MONITORING REPORT

FIRST HALF OF 2015
(JANUARY THRU JUNE)

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2015

FIELD DATA SHEET OF

FIRST AND SECOND QUARTER

CONTROLS

SW ALLUVIUM

ZONE – 1

ZONE – 3

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: JANUARY QUARTER: FIRST YEAR: 2015

SOUTHWEST ALLUVIUM

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP (°C)
509-D	1/5/2015 0845	82.41	6949.5	6867.09	6,370	6.63	10.8
624	1/6/2015 0955	52.92	6898.7	6845.78	5,150	6.74	12.1
627	1/6/2015 1335	60.58	6892.4	6831.82	4,440	7.01	13.8
632	1/5/2015 1235	47.44	6903.6	6856.16	6,640	6.65	12.8
801	1/5/2015 1320	54.32	6904.3	6849.98	6,710	6.76	13.1
802	1/5/2015 1148	50.84	6907.1	6856.26	6,500	6.73	14.2
803	1/5/2015 1020	65.62	6922.6	6856.98	6,150	6.72	12.6
808	1/5/2015 1102	52.95	6910.7	6857.75	6,390	6.68	13.1
GW-1	1/5/2015 1510	64.22	6916.5	6852.28	6,500	6.81	11.5
GW-2	1/5/2015 1415	58.82	6912.9	6854.08	7,860	6.53	11.4
GW-3	1/6/2015 1130	55.56	6910.0	6854.44	5,180	6.89	12.6
EPA-23	1/5/2015 0932	58.98	6926.5	6867.52	4,410	6.95	11.3
EPA-25	1/6/2015 1240	56.00	6903.4	6847.40	4,500	6.90	13.1
EPA-28	1/5/2015 1602	65.37	6917.9	6852.53	4,750	7.12	10.3
EPA-28 DUP (QA/QC)	1/5/2015 1640	65.92	6917.9	6851.98	4,810	7.09	9.4
SBL-1	1/6/2015 1025	50.98	6896.3	6845.32	7,180	6.73	12.5
805	1/15/2015 0939	57.40	6915.6	6858.20			
807	01/15/2015 0928	61.83	6923.4	6861.57			

COMMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2015

SOUTHWEST ALLUVIUM

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
509-D	4-6 0907	82.31	6949.50	6867.19	6,590	6.42	12.6
624	4-7 0850	53.24	6898.70	6845.46	5,350	6.58	13.6
627	4-7 1300	60.54	6892.40	6831.86	4,390	6.94	15.2
632	4-6 1305	47.58	6903.60	6856.02	6,620	6.49	13.8
801	4-6 1350	54.81	6904.30	6849.49	6,790	6.30	14.7
802	4-6 1225	50.97	6907.10	6856.13	6,540	6.56	14.3
803	4-6 1050	65.42	6922.60	6857.18	5,990	6.52	13.5
808	4-6 1135	52.68	6910.70	6858.02	6,480	6.49	14.4
GW-1	4-6 1535	64.42	6916.50	6852.08	6,320	6.62	14.1
GW-2	4-6 1440	58.68	6912.90	6854.22	7,930	6.36	13.4
GW-3	4-7 1042	55.77	6910.00	6854.23	5,290	6.65	14.0
EPA-23	4-6 1003	58.77	6926.50	6867.73	4,490	6.69	13.5
EPA-25	4-7 1200	56.16	6903.40	6847.24	4,520	6.79	14.3
EPA-28	4-6 1620	65.36	6917.90	6852.54	4,720	6.82	15.0
EPA-28 DUP (QA/QC)	4-6 1700	65.87	6917.90	6852.03	4,750	6.83	14.5
SBL-1	4-7 0942	50.99	6896.30	6845.31	7,410	6.68	14.3
805	4-16 0945	57.22	6915.60	6858.38			
807	4-16 0940	61.68	6923.40	6861.72			

COMMENTS: _____

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: JANUARY QUARTER: FIRST YEAR: 2015

ZONE - 1

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
515-A	1/6/2015 1556	106.25	7008.8	6902.55	9,100	6.19	11.8
604	1/6/2015 1648	105.18	7006.0	6900.82	6,400	5.55	10.0
614	1/6/2015 1448	105.45	7012.0	6906.55	7,610	6.61	12.8
TWQ-142	1/7/2015 1410	202.05	6983.4	6781.35	1,854	8.09	13.5
EPA-2	1/7/2015 1215	174.69	7019.5	6844.81	3,130	7.05	13.3
EPA-2 *(QA/QC) DUP *(QA/QC)	1/7/2015 1250	175.44	7019.5	6844.06	3,210	7.01	13.4
EPA-4	1/7/2015 0935	208.48	7069.8	6831.32	4,290	6.93	12.5
EPA-5	1/7/2015 1032	127.12	7011.5	6884.38	4,080	6.09	12.8
EPA-7	1/7/2015 1125	116.76	7011.7	6894.94	7,010	6.31	12.9
Rinsate *(QA/QC)	1/7/2015 1450				4	7.17	14.7
Field Blank (QA/QC)	1/7/2015 1500				4	5.73	18.1
TWQ-143	1/15/2015 1104	208.46	6989.6	6781.14			
EPA-8	1/7/2015 1024	216.74	7076.4	6859.66			
505-A	1/15/2015 0959	121.08	6963.1	6842.02			
502-A	1/15/2015 1013	196.34	7025.3	6828.96			
501-A	1/15/2015 1024	212.75	7048.0	6835.25			
504-A	1/15/2015 1032	201.24	7001.4	6800.16			
412	1/15/2015 1051	185.91	6979.4	6793.49			

COMMENTS: _____

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2015

ZONE - 1

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
515-A	4-7 1500	106.09	7008.80	6902.71	9,040	5.99	15.1
604	4-7 1552	105.09	7006.00	6900.91	6,350	5.49	14.5
614	4-7 1355	105.22	7012.00	6906.78	7,690	6.42	15.1
TWQ-142	4-8 1340	202.74	6983.40	6780.66	1,900	7.80	13.9
EPA-2	4-8 1205	174.41	7019.50	6845.09	3,140	6.84	13.1
EPA-2 DUP (QA/QC)	4-8 1240	175.19	7019.50	6844.31	3,270	6.87	13.9
EPA-4	4-8 1058	208.13	7069.80	6861.67	4,280	6.79	13.8
EPA-5	4-8 1005	126.74	7011.50	6884.76	4,170	6.05	13.4
EPA-7	4-8 0925	116.43	7011.70	6895.27	7,200	6.20	13.0
Rinsate (QA/QC)	4-8 1430				4	8.19	20.8
Field Blank (QA/QC)	4-8 1530				91	7.20	15.4
TWQ-143	4-16 1229	208.30	6989.60	6781.30			
EPA-8	4-8 1145	216.33	7076.40	6860.07			
505-A	4-16 1005	121.45	6963.10	6841.65			
502-A	4-16 1050	196.03	7025.30	6829.27			
501-A	4-16 1056	212.45	7048.00	6835.55			
504-A	4-16 1140	200.93	7001.40	6800.47			
412	4-16 1151	185.78	6979.40	6793.62			

COMMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: JANUARY QUARTER: FIRST YEAR: 2015

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
504-B	1/14/2015 1309	Dry @ 171.00	7001.80				
517	1-12 1015	105.35	6971.29	6865.94	5,410	2.80	10.2
EPA-14	1-12 1640	124.52	6963.88	6839.36	3,810	6.70	9.7
420	1-12 1547	155.24	6982.60	6827.36	3,890	6.94	10.6
711	1-12 1255	183.57	7042.75	6859.18	4,330	4.78	11.4
613	1-12 0930	79.79	6961.30	6881.51	8,840	3.01	10.7
708	1-12 1135	157.05	7011.73	6854.68	5,560	3.44	10.1
Rinsate (QA/QC)	1-13 1525				5	5.19	7.4
Field Blank (QA/QC)	1-13 1600				5	6.12	17.5
NBL-1	1-15 1049	Mud @ 197.00	6991.96				
EPA-9	1-17 1020	170.75	7076.60	6905.85			
EPA-13	1-12 1336	168.72	7031.66	6862.94	6,100	6.13	10.4
702	1-15 0922	83.38	6974.20	6890.82			
710	1-15 0954	165.26	7016.36	6851.10			
712	1-15 1008	177.02	7022.16	6845.14			
713	1-15 1013	168.06	7024.19	6856.13			
714	1-15 0938	104.17	6962.54	6858.37			
701	1-15 0931	84.55	6961.30	6876.75			
706	1-15 0945	116.40	6972.12	6855.72			
707	1-15 1000	161.61	7005.20	6843.59			
717	1-13 0850	133.03	6972.07	6839.04	5,640	3.58	11.0
717 DUPL (QA/QC)	1-13 0925	133.31	6972.07	6838.76	5,650	3.58	10.1
719	1-12 1428	170.04	7001.48	6831.44	4,910	5.35	10.6
402	1-15 1021	133.89	6968.20	6834.31			
446	1-15 1120	160.20	6998.30	6838.10			
424**	1-15 1115	141.23	6972.62	6831.39			

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2015

ZONE - 3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
504-B	4-16 1137	Dry @171.0	7001.80				
517	4-13 0930	105.43	6971.29	6865.86	5,500	2.86	13.4
EPA-14	4-14 0935	124.73	6963.88	6839.15	3,760	6.45	13.3
420	4-13 1545	155.55	6982.60	6827.05	3,780	6.61	15.3
711	4-13 1240	183.69	7042.75	6859.06	4,470	4.66	14.3
613	4-13 0840	79.90	6961.30	6881.40	8,910	3.07	12.6
708	4-13 1055	157.18	7011.73	6854.55	5,440	2.84	14.5
Rinsate (QA/QC)	4-14 1755				90	7.97	24.1
Field Blank (QA/QC)	4-14 1800				90	8.24	18.3
NBL-1	4-16 1320	Mud @197.2	6991.96				
EPA-9	4-8 1140	170.27	7076.60	6906.33			
EPA-13	4-13 1310	168.89	7031.66	6862.77	6,050	5.92	16.7
702	4-16 0955	83.41	6974.20	6890.79			
710	4-16 1107	165.33	7016.36	6851.03			
712	4-16 1119	176.79	7022.16	6845.37			
713	4-16 1124	167.87	7024.19	6856.32			
714	4-16 1013	103.93	6962.54	6858.61			
701	4-16 1000	84.48	6961.30	6876.82			
706	4-16 1030	116.35	6972.12	6855.77			
707	4-16 1110	161.51	7005.20	6843.69			
717	4-14 1140	133.26	6972.07	6838.81	5,610	3.46	14.2
717 DUP (QA/QC)	4-14 1215	133.56	7042.75	6909.19	5,660	3.45	13.8
719	4-13 1405	170.28	7001.48	6831.20	5,080	5.05	18.6
402	4-16 1018	134.00	6968.20	6834.20			
446	4-16 1248	159.89	6998.30	6838.41			
424**	4-16 1020	141.53	6972.62	6831.09			

COMMENTS:

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: JANUARY QUARTER: FIRST YEAR: 2015

SUPPLEMENTAL

ZONE -3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND. (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
PB-2	1/15/2015 1047	188.43	6989.70	6801.27			
PB-3	1/13/2015 1140	190.66	6990.23	6799.57	3,900	5.75	15.1
NBL-2	1/13/2015 1005	167.08	6975.61	6808.53	3,420	6.67	9.7
RW-A	1/13/2015 1140	175.15	6983.23	6808.08	4,160	6.36	10.6
RW-11			6983.73				
NW-1	1/13/2015 0954	198.6	6997.15	6798.55	3,650	7.09	9.5
NW-2	1/13/2015 1119	197.35	6989.76	6792.41	4,110	6.48	11.0
NW-3	1/13/2015 1044	188.13	6985.57	6797.44	3,810	6.92	8.6
NW-4	1/13/2015 1017	200.17	6990.13	6789.96	3,900	7.01	9.2
NW-5	1/13/2015 1100	187.89	6985.85	6797.96	4,290	6.69	11.8
PB-4	1/13/2015 1220	189.74	6990.18	6800.44	4,960	2.87	8.1
MW-6	1/13/2015 1325	198.19	6990.94	6792.75	4,300	6.97	14.3
MW-7	1/13/2015 1030	195.03	6988.82	6793.79	3,680	6.86	8.6
IW-A			6992.77				

COMMENTS: _____

GROUND WATER FIELD MONITORING
WATER ELEVATIONS, pH, CONDUCTIVITY AND TEMPERATURE

MONTH: April QUARTER: Second YEAR: 2015

SUPPLEMENTAL

ZONE -3

WELL NO.	DEPTH SAMPLE DATE/TIME	DEPTH TO WATER (FT)	REF. ELEV.	TOP OF WATER ELEV.	FIELD COND (US/CM)	FIELD pH (UNITS)	FIELD TEMP. (°C)
PB-2	4-16 1207	188.73	6989.70	6800.97			
PB-3	4-14 1445	191.37	6990.23	6798.86	4,080	6.18	21.9
NBL-2	4-14 1250	167.71	6975.61	6807.90	3,400	6.45	13.7
RW-A	4-14 1326	175.42	6983.23	6807.81	4,460	6.08	16.8
RW-11			6983.73				
NW-1	4-14 1200	198.60	6997.15	6798.55	3,890	6.94	10.8
NW-2	4-14 1236	197.32	6989.76	6792.44	4,380	6.27	15.3
NW-3	4-14 1253	188.62	6985.57	6796.95	4,110	6.80	11.1
NW-4	4-14 1215	200.12	6990.13	6790.01	4,250	6.42	20.4
NW-5	4-14 1307	188.43	6985.85	6797.42	4,570	6.44	12.4
PB-4	4-14 1625	190.35	6990.18	6799.83	4,830	2.97	18.7
MW-6	4-14 1735	198.57	6990.94	6792.37	4,330	6.86	19.2
MW-7	4-14 1310	195.27	6988.82	6793.55	3,750	6.48	18.8
IW-A	4-16 1213	199.45	6992.77	6793.32			

COMMENTS: Well PB-3 & MW-6 samples are collected entirely from discharge line purged out with nitrogen and not at surface outlet port due to very low water volume (i.e. sample does not discharge or reach surface).

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2015

SOUTH WEST ALLUVIUM

*509-D

624

627

*632

801

802

803

808

*GW-1

*GW-2

*GW-3

*EPA-23

EPA-25

*EPA-28

SBL-1

LEVELS ONLY

805

807

NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET

INTENTIONALLY LEFT BLANK

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-001
Client Sample ID: 509-D

Report Date: 02/27/15
Collection Date: 01/05/15 08:45
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2420	mg/L		5		A2320 B	01/08/15 17:48 / wc
Calcium	824	mg/L		1		E200.7	01/09/15 15:03 / sf
Chloride	339	mg/L	D	2		E300.0	01/08/15 22:56 / wc
Magnesium	374	mg/L		1		E200.7	01/09/15 15:03 / sf
Nitrogen, Ammonia as N	0.07	mg/L		0.05		A4500-NH3 G	01/09/15 12:43 / lr
Nitrogen, Nitrate+Nitrite as N	9.2	mg/L	D	0.5		E353.2	01/09/15 16:10 / lr
Potassium	13	mg/L		1		E200.7	01/09/15 15:03 / sf
Sodium	410	mg/L		1		E200.7	01/09/15 15:03 / sf
Sulfate	2100	mg/L	D	8		E300.0	01/08/15 22:56 / wc
PHYSICAL PROPERTIES							
pH	6.62	s.u.	H	0.01		A4500-H B	01/08/15 14:40 / alp
Solids, Total Dissolved TDS @ 180 C	5880	mg/L		100		A2540 C	01/08/15 14:53 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 00:42 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/13/15 00:42 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 00:42 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 00:42 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 00:42 / clm
Manganese	2.99	mg/L		0.01		E200.8	01/13/15 00:42 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 00:42 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 00:42 / clm
Uranium	0.264	mg/L		0.0003		E200.8	01/13/15 00:42 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 00:42 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 13:05 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:01 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.1	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	-0.01	pCi/L	U			E909.0	01/21/15 13:07 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 13:07 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 13:07 / eli-cs
Radium 226	0.41	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.15	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	1.2	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.1	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.07	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-001
Client Sample ID: 509-D

Report Date: 02/27/15
Collection Date: 01/05/15 08:45
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.84	%				A1030 E	01/13/15 07:07 / kbh
Anions	93.4	meq/L				A1030 E	01/13/15 07:07 / kbh
Cations	90.0	meq/L				A1030 E	01/13/15 07:07 / kbh
Solids, Total Dissolved Calculated	5300	mg/L				A1030 E	01/13/15 07:07 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	01/13/15 07:07 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/08/15 22:59 / jlr
Bromoform	ND	ug/L		0.50		E624	01/08/15 22:59 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/08/15 22:59 / jlr
Chloroform	ND	ug/L		0.50		E624	01/08/15 22:59 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/08/15 22:59 / jlr
Surr: 1,2-Dichlorobenzene-d4	107	%REC		73.7-126		E624	01/08/15 22:59 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/08/15 22:59 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	01/08/15 22:59 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	01/08/15 22:59 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-001
Client Sample ID: 509-D

Report Date: 05/18/15
Collection Date: 04/06/15 09:07
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2540	mg/L		5		A2320 B	04/10/15 16:44 / wc
Calcium	862	mg/L		1		E200.7	04/13/15 19:30 / sf
Chloride	417	mg/L	D	2		E300.0	04/13/15 20:22 / wc
Magnesium	343	mg/L		1		E200.7	04/13/15 19:30 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/15 15:41 / lr
Nitrogen, Nitrate+Nitrite as N	7.1	mg/L	D	0.2		E353.2	04/10/15 12:22 / lr
Potassium	12	mg/L		1		E200.7	04/13/15 19:30 / sf
Sodium	399	mg/L		1		E200.7	04/13/15 19:30 / sf
Sulfate	1950	mg/L	D	8		E300.0	04/13/15 20:22 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	04/10/15 11:59 / lmc
Solids, Total Dissolved TDS @ 180 C	5410	mg/L		40		A2540 C	04/10/15 12:41 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 21:47 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 21:47 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:34 / clm
Cobalt	0.01	mg/L		0.01		E200.8	04/21/15 21:34 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 21:34 / clm
Manganese	3.67	mg/L		0.01		E200.7	04/15/15 21:47 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 21:47 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 21:47 / sf
Uranium	0.256	mg/L		0.0003		E200.8	04/21/15 21:34 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 21:47 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 13:46 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:44 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.7	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Lead 210	-0.2	pCi/L	U			E909.0	04/22/15 14:45 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/22/15 14:45 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/22/15 14:45 / eli-cs
Radium 226	0.63	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.18	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.19	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.92	pCi/L	U			RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.64	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	0.98	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-001
Client Sample ID: 509-D

Report Date: 05/18/15
Collection Date: 04/06/15 09:07
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.006	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-3.06	%				A1030 E	04/15/15 09:03 / kbh
Anions	94.5	meq/L				A1030 E	04/15/15 09:03 / kbh
Cations	88.9	meq/L				A1030 E	04/15/15 09:03 / kbh
Solids, Total Dissolved Calculated	5300	mg/L				A1030 E	04/15/15 09:03 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/15/15 09:03 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 17:52 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 17:52 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 17:52 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 17:52 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 17:52 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/13/15 17:52 / jlr
Surr: Dibromofluoromethane	123	%REC		64.4-131		E624	04/13/15 17:52 / jlr
Surr: p-Bromofluorobenzene	100	%REC		67.1-133		E624	04/13/15 17:52 / jlr
Surr: Toluene-d8	110	%REC		79.7-125		E624	04/13/15 17:52 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		509-D	509-D	509-D	509-D
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-001	C15010153-001	C14100513-001	C14070373-001
Bicarbonate as HCO3	mg/L	2540	2420	2470	2450
Calcium	mg/L	862	824	864	820
Chloride	mg/L	417	339	353	352
Magnesium	mg/L	343	374	345	356
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.07	0.34	0.12
Nitrogen, Nitrate+Nitrite as N	mg/L	7.1	9.2	10.9	8.4
Potassium	mg/L	12	13	12	13
Sodium	mg/L	399	410	399	408
Sulfate	mg/L	1950	2100	2010	2090
pH	s.u.	6.57	6.62	6.64	6.62
Solids, Total Dissolved TDS @ 180 C	mg/L	5410	5880	5500	5680
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.01	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.67	2.99	3.16	3.22
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.256	0.264	0.270	0.222
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.7 *	2.1 *	0.3	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.3	1.4	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.2	-0.01	-0.6	0.4
Lead 210 precision (±)	pCi/L	0.7	0.9	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.63	0.41	0.50	0.51
Radium 226 precision (±)	pCi/L	0.18	0.15	0.18	0.15
Radium 226 MDC	pCi/L	0.19	0.17	0.18	0.15
Radium 228	pCi/L	0.92	1.2	3.5	1.3
Radium 228 precision (±)	pCi/L	0.64	0.68	0.95	0.75
Radium 228 MDC	pCi/L	0.98	1.1	1.3	1.1
Thorium 230	pCi/L	-0.006	0.07	0.04	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.1	0.09	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-3.06	-1.84	-2.06	-3.30
Anions	meq/L	94.5	93.4	92.9	94.2
Cations	meq/L	88.9	90.0	89.1	88.2
Solids, Total Dissolved Calculated	mg/L	5300	5300	5300	5300
TDS Balance (0.80 - 1.20)		1.02	1.11	1.05	1.07
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-001
Client Sample ID: 624

Report Date: 02/27/15
Collection Date: 01/06/15 09:55
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1540	mg/L		5		A2320 B	01/09/15 16:42 / wc
Calcium	651	mg/L		1		E200.7	01/12/15 18:40 / sf
Chloride	235	mg/L	D	2		E300.0	01/09/15 23:29 / wc
Magnesium	411	mg/L		1		E200.7	01/12/15 18:40 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:59 / lr
Nitrogen, Nitrate+Nitrite as N	73	mg/L	D	5		E353.2	01/12/15 13:31 / lr
Potassium	6	mg/L		1		E200.7	01/12/15 18:40 / sf
Sodium	286	mg/L		1		E200.7	01/12/15 18:40 / sf
Sulfate	2280	mg/L	D	8		E300.0	01/09/15 23:29 / wc
PHYSICAL PROPERTIES							
pH	6.56	s.u.	H	0.01		A4500-H B	01/09/15 13:28 / alp
Solids, Total Dissolved TDS @ 180 C	5140	mg/L		40		A2540 C	01/09/15 12:46 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:20 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:20 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 23:21 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 23:21 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:21 / clm
Manganese	0.12	mg/L		0.01		E200.7	01/14/15 14:20 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:20 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:20 / sf
Uranium	0.0392	mg/L		0.0003		E200.8	01/14/15 23:21 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:20 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 17:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:24 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.3	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.3	pCi/L	U			E909.0	01/23/15 06:38 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 06:38 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 06:38 / eli-cs
Radium 226	0.32	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.14	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	0.64	pCi/L	U			RA-05	01/21/15 11:39 / plj
Radium 228 precision (±)	0.69	pCi/L				RA-05	01/21/15 11:39 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	01/21/15 11:39 / plj
Thorium 230	0.03	pCi/L	U			E908.0	01/19/15 15:54 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/19/15 15:54 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 15:54 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-001
Client Sample ID: 624

Report Date: 02/27/15
Collection Date: 01/06/15 09:55
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.40	%				A1030 E	01/16/15 07:35 / kbh
Anions	84.4	meq/L				A1030 E	01/16/15 07:35 / kbh
Cations	78.9	meq/L				A1030 E	01/16/15 07:35 / kbh
Solids, Total Dissolved Calculated	5000	mg/L				A1030 E	01/16/15 07:35 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/16/15 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 21:27 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 21:27 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 21:27 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 21:27 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 21:27 / jlr
Surr: 1,2-Dichlorobenzene-d4	123	%REC		73.7-126		E624	01/14/15 21:27 / jlr
Surr: Dibromofluoromethane	126	%REC		64.4-131		E624	01/14/15 21:27 / jlr
Surr: p-Bromofluorobenzene	120	%REC		67.1-133		E624	01/14/15 21:27 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	01/14/15 21:27 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-001
Client Sample ID: 624

Report Date: 05/19/15
Collection Date: 04/07/15 08:50
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1610	mg/L		5		A2320 B	04/10/15 21:06 / wc
Calcium	694	mg/L		1		E200.7	04/14/15 15:51 / sf
Chloride	214	mg/L	D	2		E300.0	04/13/15 17:52 / wc
Magnesium	418	mg/L		1		E200.7	04/14/15 15:51 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:10 / lr
Nitrogen, Nitrate+Nitrite as N	73	mg/L	D	5		E353.2	04/14/15 13:32 / lr
Potassium	6	mg/L		1		E200.7	04/14/15 15:51 / sf
Sodium	298	mg/L		1		E200.7	04/14/15 15:51 / sf
Sulfate	2150	mg/L	D	8		E300.0	04/15/15 04:42 / wc
PHYSICAL PROPERTIES							
pH	6.65	s.u.	H	0.01		A4500-H B	04/13/15 10:13 / lmc
Solids, Total Dissolved TDS @ 180 C	5250	mg/L		40		A2540 C	04/13/15 10:16 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:32 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:32 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:35 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:35 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:35 / smm
Manganese	0.13	mg/L		0.01		E200.7	04/15/15 23:32 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:32 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:32 / sf
Uranium	0.0361	mg/L		0.0003		E200.8	04/16/15 23:35 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:32 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 19:47 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:21 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1	pCi/L	U			E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U MDC	1.4	pCi/L				E900.1	04/13/15 23:16 / dmf
Lead 210	-0.5	pCi/L	U			E909.0	04/23/15 12:00 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 12:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 12:00 / eli-cs
Radium 226	0.47	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	0.99	pCi/L	U			RA-05	04/17/15 11:21 / plj
Radium 228 precision (±)	0.80	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/15 11:21 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-001
Client Sample ID: 624

Report Date: 05/19/15
Collection Date: 04/07/15 08:50
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.0	pCi/L	U			E908.0	04/17/15 16:12 / cng
Thorium 230 precision (±)	0.05	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.09	%				A1030 E	04/20/15 07:49 / kbh
Anions	82.3	meq/L				A1030 E	04/20/15 07:49 / kbh
Cations	82.2	meq/L				A1030 E	04/20/15 07:49 / kbh
Solids, Total Dissolved Calculated	4900	mg/L				A1030 E	04/20/15 07:49 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/20/15 07:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 17:50 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 17:50 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 17:50 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 17:50 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 17:50 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/13/15 17:50 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	04/13/15 17:50 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/13/15 17:50 / jlr
Surr: Toluene-d8	103	%REC		79.7-125		E624	04/13/15 17:50 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		624	624	624	624
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040353-001	C15010193-001	C14100552-002	C14070432-001
Bicarbonate as HCO3	mg/L	1610	1540	1620	1600
Calcium	mg/L	694	651	684	712
Chloride	mg/L	214	235	210	204
Magnesium	mg/L	418	411	417	444
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	73	73	68	72
Potassium	mg/L	6	6	6	6
Sodium	mg/L	298	286	289	312
Sulfate	mg/L	2150	2280	2220	2180
pH	s.u.	6.65	6.56	6.63	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	5250	5140	5270	5220
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.13	0.12	0.13	0.16
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0361	0.0392	0.0385	0.0408
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1 *	1.3 *	0.2	0.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	1	1.3	0.3	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1.4	1.8	0.5	0.6
Lead 210	pCi/L	-0.5	0.3	-0.1	0.04
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.47	0.32	0.31	0.35
Radium 226 precision (±)	pCi/L	0.15	0.14	0.15	0.13
Radium 226 MDC	pCi/L	0.15	0.16	0.18	0.15
Radium 228	pCi/L	0.99	0.64	1.2	2.3
Radium 228 precision (±)	pCi/L	0.80	0.69	0.86	0.92
Radium 228 MDC	pCi/L	1.2	1.1	1.3	1.3
Thorium 230	pCi/L	0.0	0.03	0.008	-0.001
Thorium 230 precision (±)	pCi/L	0.05	0.05	0.05	0.03
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.07
A/C Balance (± 5)	%	-0.09	-3.40	-1.57	2.07
Anions	meq/L	82.3	84.4	83.7	82.3
Cations	meq/L	82.2	78.9	81.1	85.8
Solids, Total Dissolved Calculated	mg/L	4900	5000	5000	5000
TDS Balance (0.80 - 1.20)		1.07	1.03	1.06	1.05
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-005
Client Sample ID: 627

Report Date: 02/27/15
Collection Date: 01/06/15 13:35
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	595	mg/L		5		A2320 B	01/09/15 17:18 / wc
Calcium	517	mg/L		1		E200.7	01/12/15 18:55 / sf
Chloride	42	mg/L	D	2		E300.0	01/10/15 01:01 / wc
Magnesium	222	mg/L		1		E200.7	01/12/15 18:55 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:05 / lr
Nitrogen, Nitrate+Nitrite as N	83	mg/L	D	5		E353.2	01/12/15 13:51 / lr
Potassium	5	mg/L		1		E200.7	01/12/15 18:55 / sf
Sodium	382	mg/L		1		E200.7	01/12/15 18:55 / sf
Sulfate	2370	mg/L	D	8		E300.0	01/10/15 01:01 / wc
PHYSICAL PROPERTIES							
pH	6.86	s.u.	H	0.01		A4500-H B	01/09/15 13:40 / alp
Solids, Total Dissolved TDS @ 180 C	4240	mg/L		40		A2540 C	01/09/15 12:48 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:35 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:35 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 23:35 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 23:35 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:35 / clm
Manganese	0.04	mg/L		0.01		E200.7	01/14/15 14:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:35 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:35 / sf
Uranium	0.0212	mg/L		0.0003		E200.8	01/14/15 23:35 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 17:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:37 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.6	pCi/L				E900.1	01/30/15 22:08 / dmf
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	01/30/15 22:08 / dmf
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	01/30/15 22:08 / dmf
Lead 210	-0.07	pCi/L	U			E909.0	01/23/15 11:15 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 11:15 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 11:15 / eli-cs
Radium 226	0.21	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.12	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	0.77	pCi/L	U			RA-05	01/21/15 11:40 / plj
Radium 228 precision (±)	0.71	pCi/L				RA-05	01/21/15 11:40 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	01/21/15 11:40 / plj
Thorium 230	0.06	pCi/L	U			E908.0	01/19/15 15:55 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/19/15 15:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 15:55 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-005
Client Sample ID: 627

Report Date: 02/27/15
Collection Date: 01/06/15 13:35
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.26	%				A1030 E	01/16/15 07:36 / kbh
Anions	66.2	meq/L				A1030 E	01/16/15 07:36 / kbh
Cations	60.8	meq/L				A1030 E	01/16/15 07:36 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	01/16/15 07:36 / kbh
TDS Balance (0.80 - 1.20)	1.01					A1030 E	01/16/15 07:36 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 23:46 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 23:46 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 23:46 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 23:46 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 23:46 / jlr
Surr: 1,2-Dichlorobenzene-d4	122	%REC		73.7-126		E624	01/14/15 23:46 / jlr
Surr: Dibromofluoromethane	120	%REC		64.4-131		E624	01/14/15 23:46 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/14/15 23:46 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	01/14/15 23:46 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-005
Client Sample ID: 627

Report Date: 05/19/15
Collection Date: 04/07/15 13:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	625	mg/L		5		A2320 B	04/10/15 21:56 / wc
Calcium	532	mg/L		1		E200.7	04/14/15 16:54 / sf
Chloride	39	mg/L	D	2		E300.0	04/15/15 06:40 / wc
Magnesium	228	mg/L		1		E200.7	04/14/15 16:54 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:25 / lr
Nitrogen, Nitrate+Nitrite as N	82	mg/L	D	5		E353.2	04/14/15 13:47 / lr
Potassium	5	mg/L		1		E200.7	04/14/15 16:54 / sf
Sodium	395	mg/L		1		E200.7	04/14/15 16:54 / sf
Sulfate	2230	mg/L	D	8		E300.0	04/15/15 06:40 / wc
PHYSICAL PROPERTIES							
pH	6.92	s.u.	H	0.01		A4500-H B	04/13/15 10:39 / lmc
Solids, Total Dissolved TDS @ 180 C	4260	mg/L		40		A2540 C	04/13/15 10:22 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:56 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:56 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 22:14 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 22:14 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 22:14 / clm
Manganese	0.15	mg/L		0.01		E200.8	04/21/15 22:14 / clm
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:56 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:56 / sf
Uranium	0.0200	mg/L		0.0003		E200.8	04/21/15 22:14 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:56 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 20:35 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:31 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	04/13/15 23:16 / dmf
Lead 210	0.8	pCi/L	U			E909.0	04/23/15 18:51 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/23/15 18:51 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 18:51 / eli-cs
Radium 226	0.44	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 precision (±)	0.15	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 228	0.86	pCi/L	U			RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.75	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-005
Client Sample ID: 627

Report Date: 05/19/15
Collection Date: 04/07/15 13:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.009	pCi/L	U			E908.0	04/17/15 16:12 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.23	%				A1030 E	04/20/15 07:50 / kbh
Anions	62.9	meq/L				A1030 E	04/20/15 07:50 / kbh
Cations	62.7	meq/L				A1030 E	04/20/15 07:50 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	04/20/15 07:50 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/20/15 07:50 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 20:10 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 20:10 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 20:10 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 20:10 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 20:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/13/15 20:10 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/13/15 20:10 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/13/15 20:10 / jlr
Surr: Toluene-d8	103	%REC		79.7-125		E624	04/13/15 20:10 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		627	627	627	627
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040353-005	C15010193-005	C14100552-005	C14070432-005
Bicarbonate as HCO3	mg/L	625	595	613	623
Calcium	mg/L	532	517	527	527
Chloride	mg/L	39	42	33	33
Magnesium	mg/L	228	222	228	237
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	82	83	75	80
Potassium	mg/L	5	5	5	6
Sodium	mg/L	395	382	392	438
Sulfate	mg/L	2230	2370	2230	2310
pH	s.u.	6.92	6.86	6.93	6.87
Solids, Total Dissolved TDS @ 180 C	mg/L	4260	4240	4280	4240
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.15	0.04	0.08	0.03
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0200	0.0212	0.0208	0.0198
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.5	1.6	0.3	-0.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.0	1.0	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.3	1.3	0.5	0.6
Lead 210	pCi/L	0.8	-0.07	0.6	0.01
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.44	0.21	0.21	0.20
Radium 226 precision (±)	pCi/L	0.15	0.12	0.14	0.12
Radium 226 MDC	pCi/L	0.16	0.16	0.19	0.16
Radium 228	pCi/L	0.86	0.77	1.2	0.09
Radium 228 precision (±)	pCi/L	0.75	0.71	0.90	0.83
Radium 228 MDC	pCi/L	1.2	1.1	1.4	1.4
Thorium 230	pCi/L	-0.009	0.06	-0.01	0.01
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.05	0.03
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.07
A/C Balance (± 5)	%	-0.23	-4.26	-0.65	0.03
Anions	meq/L	62.9	66.2	63.1	65.0
Cations	meq/L	62.7	60.8	62.3	65.1
Solids, Total Dissolved Calculated	mg/L	4100	4200	4100	4200
TDS Balance (0.80 - 1.20)		1.05	1.01	1.05	1.00
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	1.11

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-006
Client Sample ID: 632

Report Date: 02/27/15
Collection Date: 01/05/15 12:35
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1810	mg/L		5		A2320 B	01/08/15 19:19 / wc
Calcium	579	mg/L		1		E200.7	01/09/15 15:30 / sf
Chloride	222	mg/L	D	5		E300.0	01/09/15 08:50 / wc
Magnesium	788	mg/L		1		E200.7	01/09/15 15:30 / sf
Nitrogen, Ammonia as N	0.29	mg/L		0.05		A4500-NH3 G	01/09/15 12:51 / lr
Nitrogen, Nitrate+Nitrite as N	58	mg/L	D	2		E353.2	01/12/15 12:29 / lr
Potassium	10	mg/L		1		E200.7	01/09/15 15:30 / sf
Sodium	393	mg/L		1		E200.7	01/09/15 15:30 / sf
Sulfate	3230	mg/L	D	20		E300.0	01/09/15 08:50 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	01/08/15 14:59 / alp
Solids, Total Dissolved TDS @ 180 C	7230	mg/L		100		A2540 C	01/08/15 14:54 / alp
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.8	01/13/15 01:24 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:23 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:24 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 01:24 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:24 / clm
Manganese	2.86	mg/L		0.01		E200.8	01/13/15 01:24 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:24 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:24 / clm
Uranium	0.0834	mg/L		0.0003		E200.8	01/13/15 01:24 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:24 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 14:29 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:15 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.7	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	1.4	pCi/L				E909.0	01/21/15 23:47 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 23:47 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 23:47 / eli-cs
Radium 226	0.92	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	3.1	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.2	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.0	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-006
Client Sample ID: 632

Report Date: 02/27/15
Collection Date: 01/05/15 12:35
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	2.01	%				A1030 E	01/13/15 07:08 / kbh
Anions	107	meq/L				A1030 E	01/13/15 07:08 / kbh
Cations	111	meq/L				A1030 E	01/13/15 07:08 / kbh
Solids, Total Dissolved Calculated	6400	mg/L				A1030 E	01/13/15 07:08 / kbh
TDS Balance (0.80 - 1.20)	1.14					A1030 E	01/13/15 07:08 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 05:25 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 05:25 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 05:25 / jlr
Chloroform	3.51	ug/L		0.50		E624	01/09/15 05:25 / jlr
Trihalomethanes, Total	3.51	ug/L		0.50		E624	01/09/15 05:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		73.7-126		E624	01/09/15 05:25 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	01/09/15 05:25 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	01/09/15 05:25 / jlr
Surr: Toluene-d8	103	%REC		79.7-125		E624	01/09/15 05:25 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-006
Client Sample ID: 632

Report Date: 05/18/15
Collection Date: 04/06/15 13:05
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1850	mg/L		5		A2320 B	04/10/15 17:55 / wc
Calcium	557	mg/L		1		E200.7	04/13/15 20:02 / sf
Chloride	260	mg/L	D	5		E300.0	04/17/15 00:30 / wc
Magnesium	783	mg/L		1		E200.7	04/13/15 20:02 / sf
Nitrogen, Ammonia as N	0.13	mg/L		0.05		A4500-NH3 G	04/10/15 15:50 / lr
Nitrogen, Nitrate+Nitrite as N	57	mg/L	D	2		E353.2	04/14/15 12:30 / lr
Potassium	10	mg/L		1		E200.7	04/13/15 20:02 / sf
Sodium	388	mg/L		1		E200.7	04/13/15 20:02 / sf
Sulfate	3560	mg/L	D	20		E300.0	04/17/15 00:30 / wc
PHYSICAL PROPERTIES							
pH	6.54	s.u.	H	0.01		A4500-H B	04/10/15 12:17 / lmc
Solids, Total Dissolved TDS @ 180 C	6970	mg/L		100		A2540 C	04/10/15 12:43 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 22:47 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 22:47 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:50 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 21:50 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 21:50 / clm
Manganese	1.77	mg/L		0.01		E200.7	04/15/15 22:47 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 22:47 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 22:47 / sf
Uranium	0.0742	mg/L		0.0003		E200.8	04/21/15 21:50 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 22:47 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 15:10 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:58 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	4.3	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.8	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	0.4	pCi/L	U			E909.0	04/23/15 01:43 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/23/15 01:43 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 01:43 / eli-cs
Radium 226	0.99	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.23	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.21	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	1.8	pCi/L				RA-05	04/16/15 09:30 / plj
Radium 228 precision (±)	0.79	pCi/L				RA-05	04/16/15 09:30 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/16/15 09:30 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-006
Client Sample ID: 632

Report Date: 05/18/15
Collection Date: 04/06/15 13:05
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-5.41	%				A1030 E	05/04/15 10:17 / kbh
Anions	122	meq/L				A1030 E	05/04/15 10:17 / kbh
Cations	109	meq/L				A1030 E	05/04/15 10:17 / kbh
Solids, Total Dissolved Calculated	7100	mg/L				A1030 E	05/04/15 10:17 / kbh
TDS Balance (0.80 - 1.20)	0.99					A1030 E	05/04/15 10:17 / kbh
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 20:47 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 20:47 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 20:47 / jlr
Chloroform	4.08	ug/L		0.50		E624	04/13/15 20:47 / jlr
Trihalomethanes, Total	4.08	ug/L		0.50		E624	04/13/15 20:47 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/13/15 20:47 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	04/13/15 20:47 / jlr
Surr: p-Bromofluorobenzene	103	%REC		67.1-133		E624	04/13/15 20:47 / jlr
Surr: Toluene-d8	110	%REC		79.7-125		E624	04/13/15 20:47 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		632	632	632	632
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	9/29/2014
Analyte	RUnits	C15040322-006	C15010153-006	C14100513-006	C14070373-006
Bicarbonate as HCO3	mg/L	1850	1810	1870	1870
Calcium	mg/L	557	579	584	580
Chloride	mg/L	260	222	254	226
Magnesium	mg/L	783	788	803	758
Nitrogen, Ammonia as N	mg/L	0.13	0.29	0.34	0.18
Nitrogen, Nitrate+Nitrite as N	mg/L	57	58	59	58
Potassium	mg/L	10	10	10	10
Sodium	mg/L	388	393	398	395
Sulfate	mg/L	3560	3230	3490	3410
pH	s.u.	6.54	6.64	6.57	6.57
Solids, Total Dissolved TDS @ 180 C	mg/L	6970	7230	7030	7010
Aluminum	mg/L	ND(0.1)	0.1	ND(0.1)	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.77	2.86	2.82	1.52
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0742	0.0834	0.0807	0.0622
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	4.3 *	2.7 *	1.1	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.8	1.6	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.4	1.4	1.2	0.9
Lead 210 precision (±)	pCi/L	0.8	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.99	0.92	1.0	0.74
Radium 226 precision (±)	pCi/L	0.23	0.21	0.24	0.17
Radium 226 MDC	pCi/L	0.21	0.18	0.19	0.16
Radium 228	pCi/L	1.8	3.1	1.3	1.3
Radium 228 precision (±)	pCi/L	0.79	1.0	1.0	2.3
Radium 228 MDC	pCi/L	1.1	1.2	1.6	3.7
Thorium 230	pCi/L	0.02	0.0	0.02	0.1
Thorium 230 precision (±)	pCi/L	0.08	0.06	0.07	0.09
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.1
A/C Balance (± 5)	%	-5.41	2.01	-0.79	-1.48
Anions	meq/L	122	107	115	112
Cations	meq/L	109	111	113	109
Solids, Total Dissolved Calculated	mg/L	7100	6400	6700	6600
TDS Balance (0.80 - 1.20)		0.99	1.14	1.04	1.07
Trihalomethanes, Total	ug/L	4.08	3.51	3.54	4.00

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-007
Client Sample ID: 801

Report Date: 02/27/15
Collection Date: 01/05/15 13:20
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1580	mg/L		5		A2320 B	01/08/15 19:42 / wc
Calcium	550	mg/L		1		E200.7	01/09/15 15:34 / sf
Chloride	202	mg/L	D	5		E300.0	01/09/15 09:08 / wc
Magnesium	851	mg/L		1		E200.7	01/09/15 15:34 / sf
Nitrogen, Ammonia as N	3.77	mg/L		0.05		A4500-NH3 G	01/09/15 12:53 / lr
Nitrogen, Nitrate+Nitrite as N	52	mg/L	D	2		E353.2	01/12/15 12:36 / lr
Potassium	13	mg/L		1		E200.7	01/09/15 15:34 / sf
Sodium	381	mg/L		1		E200.7	01/09/15 15:34 / sf
Sulfate	3620	mg/L	D	20		E300.0	01/09/15 09:08 / wc
PHYSICAL PROPERTIES							
pH	6.69	s.u.	H	0.01		A4500-H B	01/08/15 15:02 / alp
Solids, Total Dissolved TDS @ 180 C	7470	mg/L		100		A2540 C	01/08/15 14:54 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 01:28 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:27 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:28 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 01:28 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:28 / clm
Manganese	6.52	mg/L		0.01		E200.8	01/13/15 01:28 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:28 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:28 / clm
Uranium	0.0416	mg/L		0.0003		E200.8	01/13/15 01:28 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:28 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 14:41 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:17 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.4	pCi/L	U			E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	1.7	pCi/L				E909.0	01/22/15 01:18 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 01:18 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 01:18 / eli-cs
Radium 226	0.59	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.24	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	1.1	pCi/L	U			RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.79	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.6	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	-0.01	pCi/L	U			E908.0	01/20/15 09:29 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/20/15 09:29 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:29 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-007
Client Sample ID: 801

Report Date: 02/27/15
Collection Date: 01/05/15 13:20
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	2.12	%				A1030 E	01/13/15 07:08 / kbh
Anions	110	meq/L				A1030 E	01/13/15 07:08 / kbh
Cations	115	meq/L				A1030 E	01/13/15 07:08 / kbh
Solids, Total Dissolved Calculated	6600	mg/L				A1030 E	01/13/15 07:08 / kbh
TDS Balance (0.80 - 1.20)	1.13					A1030 E	01/13/15 07:08 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 06:00 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 06:00 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 06:00 / jlr
Chloroform	1.95	ug/L		0.50		E624	01/09/15 06:00 / jlr
Trihalomethanes, Total	1.95	ug/L		0.50		E624	01/09/15 06:00 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	01/09/15 06:00 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/09/15 06:00 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	01/09/15 06:00 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/09/15 06:00 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-007
Client Sample ID: 801

Report Date: 05/18/15
Collection Date: 04/06/15 13:50
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1530	mg/L		5		A2320 B	04/10/15 18:06 / wc
Calcium	543	mg/L		1		E200.7	04/13/15 20:06 / sf
Chloride	237	mg/L	D	2		E300.0	04/17/15 00:49 / wc
Magnesium	822	mg/L		1		E200.7	04/13/15 20:06 / sf
Nitrogen, Ammonia as N	2.55	mg/L		0.05		A4500-NH3 G	04/10/15 15:51 / lr
Nitrogen, Nitrate+Nitrite as N	48	mg/L	D	2		E353.2	04/14/15 12:32 / lr
Potassium	12	mg/L		1		E200.7	04/13/15 20:06 / sf
Sodium	364	mg/L		1		E200.7	04/13/15 20:06 / sf
Sulfate	3860	mg/L	D	8		E300.0	04/17/15 00:49 / wc
PHYSICAL PROPERTIES							
pH	6.75	s.u.	H	0.01		A4500-H B	04/10/15 12:21 / lmc
Solids, Total Dissolved TDS @ 180 C	7170	mg/L		100		A2540 C	04/10/15 12:44 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:00 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:00 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:19 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:19 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:19 / smm
Manganese	5.02	mg/L		0.01		E200.7	04/15/15 23:00 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:00 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:00 / sf
Uranium	0.0365	mg/L		0.0003		E200.8	04/16/15 23:19 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 15:22 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:00 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.4	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	0.3	pCi/L	U			E909.0	04/23/15 03:26 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/23/15 03:26 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 03:26 / eli-cs
Radium 226	0.76	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.21	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.22	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.41	pCi/L	U			RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.71	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-007
Client Sample ID: 801

Report Date: 05/18/15
Collection Date: 04/06/15 13:50
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.007	pCi/L	U			E908.0	04/16/15 09:55 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/16/15 09:55 / cng
Thorium 230 MDC	0.1	pCi/L				E908.0	04/16/15 09:55 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.11	%				A1030 E	04/24/15 10:48 / kbh
Anions	114	meq/L				A1030 E	04/24/15 10:48 / kbh
Cations	111	meq/L				A1030 E	04/24/15 10:48 / kbh
Solids, Total Dissolved Calculated	6700	mg/L				A1030 E	04/24/15 10:48 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/24/15 10:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 21:22 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 21:22 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 21:22 / jlr
Chloroform	1.85	ug/L		0.50		E624	04/13/15 21:22 / jlr
Trihalomethanes, Total	1.85	ug/L		0.50		E624	04/13/15 21:22 / jlr
Surr: 1,2-Dichlorobenzene-d4	111	%REC		73.7-126		E624	04/13/15 21:22 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	04/13/15 21:22 / jlr
Surr: p-Bromofluorobenzene	105	%REC		67.1-133		E624	04/13/15 21:22 / jlr
Surr: Toluene-d8	108	%REC		79.7-125		E624	04/13/15 21:22 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		801	801	801	801
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-007	C15010153-007	C14100513-007	C14070373-007
Bicarbonate as HCO3	mg/L	1530	1580	1620	1610
Calcium	mg/L	543	550	545	544
Chloride	mg/L	237	202	213	206
Magnesium	mg/L	822	851	853	817
Nitrogen, Ammonia as N	mg/L	2.55	3.77	5.7	4.52
Nitrogen, Nitrate+Nitrite as N	mg/L	48	52	47	42
Potassium	mg/L	12	13	12	13
Sodium	mg/L	364	381	371	371
Sulfate	mg/L	3860	3620	3900	3850
pH	s.u.	6.75	6.69	6.60	6.64
Solids, Total Dissolved TDS @ 180 C	mg/L	7170	7470	7300	7260
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.02	6.52	6.60	7.00
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0365	0.0416	0.0435	0.0340
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.4 *	1.4 *	0.5	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.3	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.3	1.7	0.6	0.5
Lead 210 precision (±)	pCi/L	0.8	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.76	0.59	0.60	0.38
Radium 226 precision (±)	pCi/L	0.21	0.21	0.20	0.14
Radium 226 MDC	pCi/L	0.22	0.24	0.20	0.16
Radium 228	pCi/L	0.41	1.1	0.99	1.0
Radium 228 precision (±)	pCi/L	0.71	0.79	1.1	0.75
Radium 228 MDC	pCi/L	1.2	1.6	1.7	1.2
Thorium 230	pCi/L	0.007	-0.01	-0.03	0.02
Thorium 230 precision (±)	pCi/L	0.06	0.06	0.1	0.07
Thorium 230 MDC	pCi/L	0.1	0.2	0.2	0.2
A/C Balance (± 5)	%	-1.11	2.12	-1.14	-1.74
Anions	meq/L	114	110	117	115
Cations	meq/L	111	115	114	111
Solids, Total Dissolved Calculated	mg/L	6700	6600	6900	6800
TDS Balance (0.80 - 1.20)		1.07	1.13	1.05	1.07
Trihalomethanes, Total	ug/L	1.85	1.95	2.17	2.28

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-005
Client Sample ID: 802

Report Date: 02/27/15
Collection Date: 01/05/15 11:48
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2010	mg/L		5		A2320 B	01/08/15 18:56 / wc
Calcium	618	mg/L		1		E200.7	01/09/15 15:26 / sf
Chloride	171	mg/L	D	5		E300.0	01/09/15 08:33 / wc
Magnesium	767	mg/L		1		E200.7	01/09/15 15:26 / sf
Nitrogen, Ammonia as N	0.10	mg/L		0.05		A4500-NH3 G	01/09/15 12:50 / lr
Nitrogen, Nitrate+Nitrite as N	96	mg/L	D	5		E353.2	01/09/15 16:20 / lr
Potassium	5	mg/L		1		E200.7	01/09/15 15:26 / sf
Sodium	332	mg/L		1		E200.7	01/09/15 15:26 / sf
Sulfate	2910	mg/L	D	20		E300.0	01/09/15 08:33 / wc
PHYSICAL PROPERTIES							
pH	6.69	s.u.	H	0.01		A4500-H B	01/08/15 14:56 / alp
Solids, Total Dissolved TDS @ 180 C	7000	mg/L		100		A2540 C	01/08/15 14:54 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 00:57 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/13/15 00:57 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 00:57 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 00:57 / clm
Lead	ND	mg/L		0.001		E200.8	01/15/15 18:10 / clm
Manganese	1.16	mg/L		0.01		E200.8	01/13/15 00:57 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 00:57 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 00:57 / clm
Uranium	0.131	mg/L		0.0003		E200.8	01/13/15 00:57 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 00:57 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 14:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:10 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	0.01	pCi/L	U			E909.0	01/21/15 22:15 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 22:15 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 22:15 / eli-cs
Radium 226	0.40	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	1.2	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.75	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.1	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.05	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-005
Client Sample ID: 802

Report Date: 02/27/15
Collection Date: 01/05/15 11:48
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.87	%				A1030 E	01/13/15 07:08 / kbh
Anions	105	meq/L				A1030 E	01/13/15 07:08 / kbh
Cations	109	meq/L				A1030 E	01/13/15 07:08 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	01/13/15 07:08 / kbh
TDS Balance (0.80 - 1.20)	1.13					A1030 E	01/13/15 07:08 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 04:50 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 04:50 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 04:50 / jlr
Chloroform	8.88	ug/L		0.50		E624	01/09/15 04:50 / jlr
Trihalomethanes, Total	8.88	ug/L		0.50		E624	01/09/15 04:50 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/09/15 04:50 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/09/15 04:50 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/09/15 04:50 / jlr
Surr: Toluene-d8	105	%REC		79.7-125		E624	01/09/15 04:50 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-005
Client Sample ID: 802

Report Date: 05/18/15
Collection Date: 04/06/15 12:25
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2130	mg/L		5		A2320 B	04/10/15 17:31 / wc
Calcium	642	mg/L		1		E200.7	04/13/15 19:58 / sf
Chloride	203	mg/L	D	2		E300.0	04/16/15 23:35 / wc
Magnesium	758	mg/L		1		E200.7	04/13/15 19:58 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/15 15:48 / lr
Nitrogen, Nitrate+Nitrite as N	84	mg/L	D	5		E353.2	04/14/15 12:27 / lr
Potassium	5	mg/L		1		E200.7	04/13/15 19:58 / sf
Sodium	324	mg/L		1		E200.7	04/13/15 19:58 / sf
Sulfate	3050	mg/L	D	8		E300.0	04/16/15 23:35 / wc
PHYSICAL PROPERTIES							
pH	6.60	s.u.	H	0.01		A4500-H B	04/10/15 12:14 / lmc
Solids, Total Dissolved TDS @ 180 C	6870	mg/L		100		A2540 C	04/10/15 12:43 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 22:43 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 22:43 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:46 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 21:46 / clm
Lead	0.001	mg/L		0.001		E200.8	04/21/15 21:46 / clm
Manganese	1.19	mg/L		0.01		E200.7	04/15/15 22:43 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 22:43 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 22:43 / sf
Uranium	0.129	mg/L		0.0003		E200.8	04/21/15 21:46 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 22:43 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 14:58 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:50 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.5	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Lead 210	-0.3	pCi/L	U			E909.0	04/23/15 00:00 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 00:00 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 00:00 / eli-cs
Radium 226	0.46	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.17	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.19	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.69	pCi/L	U			RA-05	04/16/15 09:30 / plj
Radium 228 precision (±)	0.64	pCi/L				RA-05	04/16/15 09:30 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/16/15 09:30 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-005
Client Sample ID: 802

Report Date: 05/18/15
Collection Date: 04/06/15 12:25
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.94	%				A1030 E	04/24/15 10:47 / kbh
Anions	107	meq/L				A1030 E	04/24/15 10:47 / kbh
Cations	109	meq/L				A1030 E	04/24/15 10:47 / kbh
Solids, Total Dissolved Calculated	6200	mg/L				A1030 E	04/24/15 10:47 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/24/15 10:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 20:12 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 20:12 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 20:12 / jlr
Chloroform	9.96	ug/L		0.50		E624	04/13/15 20:12 / jlr
Trihalomethanes, Total	9.96	ug/L		0.50		E624	04/13/15 20:12 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/13/15 20:12 / jlr
Surr: Dibromofluoromethane	125	%REC		64.4-131		E624	04/13/15 20:12 / jlr
Surr: p-Bromofluorobenzene	101	%REC		67.1-133		E624	04/13/15 20:12 / jlr
Surr: Toluene-d8	109	%REC		79.7-125		E624	04/13/15 20:12 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		802	802	802	802
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-005	C15010153-005	C14100513-005	C14070373-005
Bicarbonate as HCO3	mg/L	2130	2010	2070	2080
Calcium	mg/L	642	618	626	630
Chloride	mg/L	203	171	184	184
Magnesium	mg/L	758	767	777	755
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.10	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	84	96	110	96
Potassium	mg/L	5	5	5	5
Sodium	mg/L	324	332	334	320
Sulfate	mg/L	3050	2910	3050	3100
pH	s.u.	6.60	6.69	6.58	6.63
Solids, Total Dissolved TDS @ 180 C	mg/L	6870	7000	6850	6770
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.19	1.16	1.23	1.19
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.129	0.131	0.135	0.104
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.5 *	0.4 *	0.1	-0.05
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.6	1.1	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.3	0.01	0.3	0.4
Lead 210 precision (±)	pCi/L	0.7	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.46	0.40	0.31	0.11
Radium 226 precision (±)	pCi/L	0.17	0.16	0.16	0.11
Radium 226 MDC	pCi/L	0.19	0.17	0.19	0.16
Radium 228	pCi/L	0.69	1.2	0.33	0.72
Radium 228 precision (±)	pCi/L	0.64	0.75	0.99	0.73
Radium 228 MDC	pCi/L	1.0	1.1	1.6	1.2
Thorium 230	pCi/L	0.04	0.05	0.04	0.01
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.08	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	0.94	1.87	0.26	-1.43
Anions	meq/L	107	105	109	111
Cations	meq/L	109	109	110	108
Solids, Total Dissolved Calculated	mg/L	6200	6200	6400	6500
Trihalomethanes, Total	ug/L	9.96	8.88	7.96	11.6

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-003
Client Sample ID: 803

Report Date: 02/27/15
Collection Date: 01/05/15 10:20
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1720	mg/L		5		A2320 B	01/08/15 18:09 / wc
Calcium	634	mg/L		1		E200.7	01/09/15 15:19 / sf
Chloride	159	mg/L	D	2		E300.0	01/09/15 07:23 / wc
Magnesium	713	mg/L		1		E200.7	01/09/15 15:19 / sf
Nitrogen, Ammonia as N	1.30	mg/L		0.05		A4500-NH3 G	01/09/15 12:47 / lr
Nitrogen, Nitrate+Nitrite as N	42	mg/L	D	5		E353.2	01/09/15 16:15 / lr
Potassium	13	mg/L		1		E200.7	01/09/15 15:19 / sf
Sodium	287	mg/L		1		E200.7	01/09/15 15:19 / sf
Sulfate	3200	mg/L	D	8		E300.0	01/09/15 07:23 / wc
PHYSICAL PROPERTIES							
pH	6.67	s.u.	H	0.01		A4500-H B	01/08/15 14:46 / alp
Solids, Total Dissolved TDS @ 180 C	6660	mg/L		100		A2540 C	01/08/15 14:53 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 00:50 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/13/15 00:50 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 00:50 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 00:50 / clm
Lead	0.001	mg/L		0.001		E200.8	01/13/15 00:50 / clm
Manganese	2.54	mg/L		0.01		E200.8	01/13/15 00:50 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 00:50 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 00:50 / clm
Uranium	0.0890	mg/L		0.0003		E200.8	01/13/15 00:50 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 00:50 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 13:53 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:07 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.0	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	0.5	pCi/L	U			E909.0	01/21/15 19:12 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 19:12 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 19:12 / eli-cs
Radium 226	0.62	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.19	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.19	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	1.0	pCi/L	U			RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.65	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.3	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.006	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-003
Client Sample ID: 803

Report Date: 02/27/15
Collection Date: 01/05/15 10:20
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.69	%				A1030 E	01/13/15 07:07 / kbh
Anions	102	meq/L				A1030 E	01/13/15 07:07 / kbh
Cations	103	meq/L				A1030 E	01/13/15 07:07 / kbh
Solids, Total Dissolved Calculated	6000	mg/L				A1030 E	01/13/15 07:07 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	01/13/15 07:07 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 03:40 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 03:40 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 03:40 / jlr
Chloroform	ND	ug/L		0.50		E624	01/09/15 03:40 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/09/15 03:40 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	01/09/15 03:40 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/09/15 03:40 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	01/09/15 03:40 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/09/15 03:40 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-003
Client Sample ID: 803

Report Date: 05/18/15
Collection Date: 04/06/15 10:50
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1730	mg/L		5		A2320 B	04/10/15 17:06 / wc
Calcium	627	mg/L		1		E200.7	04/13/15 19:38 / sf
Chloride	171	mg/L	D	2		E300.0	04/13/15 21:35 / wc
Magnesium	712	mg/L		1		E200.7	04/13/15 19:38 / sf
Nitrogen, Ammonia as N	1.49	mg/L		0.05		A4500-NH3 G	04/10/15 15:45 / lr
Nitrogen, Nitrate+Nitrite as N	79	mg/L	D	5		E353.2	04/10/15 12:27 / lr
Potassium	12	mg/L		1		E200.7	04/13/15 19:38 / sf
Sodium	275	mg/L		1		E200.7	04/13/15 19:38 / sf
Sulfate	3290	mg/L	D	8		E300.0	04/13/15 21:35 / wc
PHYSICAL PROPERTIES							
pH	6.62	s.u.	H	0.01		A4500-H B	04/10/15 12:07 / lmc
Solids, Total Dissolved TDS @ 180 C	6380	mg/L		100		A2540 C	04/10/15 12:42 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 22:35 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 22:35 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:40 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 21:40 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 21:40 / clm
Manganese	3.04	mg/L		0.01		E200.7	04/15/15 22:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 22:35 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 22:35 / sf
Uranium	0.0804	mg/L		0.0003		E200.8	04/21/15 21:40 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 22:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 14:34 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:47 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.8	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Lead 210	-0.1	pCi/L	U			E909.0	04/22/15 20:35 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/22/15 20:35 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/22/15 20:35 / eli-cs
Radium 226	0.41	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.17	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.97	pCi/L	U			RA-05	04/16/15 09:30 / plj
Radium 228 precision (±)	0.69	pCi/L				RA-05	04/16/15 09:30 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/16/15 09:30 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-003
Client Sample ID: 803

Report Date: 05/18/15
Collection Date: 04/06/15 10:50
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.009	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.74	%				A1030 E	04/15/15 09:04 / kbh
Anions	104	meq/L				A1030 E	04/15/15 09:04 / kbh
Cations	102	meq/L				A1030 E	04/15/15 09:04 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	04/15/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/15/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 19:02 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 19:02 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 19:02 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 19:02 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 19:02 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/13/15 19:02 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	04/13/15 19:02 / jlr
Surr: p-Bromofluorobenzene	102	%REC		67.1-133		E624	04/13/15 19:02 / jlr
Surr: Toluene-d8	109	%REC		79.7-125		E624	04/13/15 19:02 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		803	803	803	803
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-003	C15010153-003	C14100513-003	C14070373-003
Bicarbonate as HCO3	mg/L	1730	1720	1710	1870
Calcium	mg/L	627	634	633	654
Chloride	mg/L	171	159	146	171
Magnesium	mg/L	712	713	714	697
Nitrogen, Ammonia as N	mg/L	1.49	1.30	1.35	2.45
Nitrogen, Nitrate+Nitrite as N	mg/L	79	42	34	42
Potassium	mg/L	12	13	12	14
Sodium	mg/L	275	287	273	284
Sulfate	mg/L	3290	3200	3130	3270
pH	s.u.	6.62	6.67	6.56	6.64
Solids, Total Dissolved TDS @ 180 C	mg/L	6380	6660	6300	6590
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	0.001	0.001	ND(0.001)
Manganese	mg/L	3.04	2.54	2.95	2.30
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0804	0.0890	0.0783	0.0842
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.8 *	2.0 *	0.3	0.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.3	1.4	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.1	0.5	0.08	0.5
Lead 210 precision (±)	pCi/L	0.7	0.9	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.41	0.62	0.20	0.27
Radium 226 precision (±)	pCi/L	0.17	0.19	0.14	0.13
Radium 226 MDC	pCi/L	0.20	0.19	0.19	0.16
Radium 228	pCi/L	0.97	1.0	0.87	0.83
Radium 228 precision (±)	pCi/L	0.69	0.65	1.0	0.76
Radium 228 MDC	pCi/L	1.1	1.3	1.6	1.2
Thorium 230	pCi/L	-0.009	0.006	0.002	0.03
Thorium 230 precision (±)	pCi/L	0.06	0.08	0.07	0.09
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-0.74	0.69	1.50	-1.79
Anions	meq/L	104	102	99.6	107
Cations	meq/L	102	103	103	103
Solids, Total Dissolved Calculated	mg/L	6100	6000	5900	6200
TDS Balance (0.80 - 1.20)		1.05	1.10	1.07	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-004
Client Sample ID: 808

Report Date: 02/27/15
Collection Date: 01/05/15 11:02
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2000	mg/L		5		A2320 B	01/08/15 18:21 / wc
Calcium	656	mg/L		1		E200.7	01/09/15 15:23 / sf
Chloride	180	mg/L	D	2		E300.0	01/09/15 08:15 / wc
Magnesium	731	mg/L		1		E200.7	01/09/15 15:23 / sf
Nitrogen, Ammonia as N	0.85	mg/L		0.05		A4500-NH3 G	01/09/15 12:48 / lr
Nitrogen, Nitrate+Nitrite as N	39	mg/L	D	5		E353.2	01/09/15 16:17 / lr
Potassium	8	mg/L		1		E200.7	01/09/15 15:23 / sf
Sodium	350	mg/L		1		E200.7	01/09/15 15:23 / sf
Sulfate	3180	mg/L	D	8		E300.0	01/09/15 08:15 / wc
PHYSICAL PROPERTIES							
pH	6.65	s.u.	H	0.01		A4500-H B	01/08/15 14:49 / alp
Solids, Total Dissolved TDS @ 180 C	6970	mg/L		100		A2540 C	01/08/15 14:54 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 00:53 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/13/15 00:53 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 00:53 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 00:53 / clm
Lead	0.001	mg/L		0.001		E200.8	01/13/15 00:53 / clm
Manganese	1.64	mg/L		0.01		E200.8	01/13/15 00:53 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 00:53 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 00:53 / clm
Uranium	0.113	mg/L		0.0003		E200.8	01/13/15 00:53 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 00:53 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 14:05 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:09 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	0.9	pCi/L	U			E909.0	01/21/15 20:44 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 20:44 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 20:44 / eli-cs
Radium 226	0.52	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	0.80	pCi/L	U			RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.76	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.2	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	-0.008	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-004
Client Sample ID: 808

Report Date: 02/27/15
Collection Date: 01/05/15 11:02
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.81	%				A1030 E	01/13/15 07:08 / kbh
Anions	107	meq/L				A1030 E	01/13/15 07:08 / kbh
Cations	108	meq/L				A1030 E	01/13/15 07:08 / kbh
Solids, Total Dissolved Calculated	6300	mg/L				A1030 E	01/13/15 07:08 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	01/13/15 07:08 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 04:15 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 04:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 04:15 / jlr
Chloroform	1.78	ug/L		0.50		E624	01/09/15 04:15 / jlr
Trihalomethanes, Total	1.78	ug/L		0.50		E624	01/09/15 04:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		73.7-126		E624	01/09/15 04:15 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	01/09/15 04:15 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/09/15 04:15 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/09/15 04:15 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-004
Client Sample ID: 808

Report Date: 05/18/15
Collection Date: 04/06/15 11:35
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2100	mg/L		5		A2320 B	04/10/15 17:18 / wc
Calcium	669	mg/L		1		E200.7	04/13/15 19:42 / sf
Chloride	212	mg/L	D	2		E300.0	04/13/15 22:31 / wc
Magnesium	790	mg/L		1		E200.7	04/13/15 19:42 / sf
Nitrogen, Ammonia as N	0.78	mg/L		0.05		A4500-NH3 G	04/10/15 15:46 / lr
Nitrogen, Nitrate+Nitrite as N	45	mg/L	D	2		E353.2	04/14/15 12:20 / lr
Potassium	7	mg/L		1		E200.7	04/13/15 19:42 / sf
Sodium	346	mg/L	D	2		E200.7	04/13/15 19:42 / sf
Sulfate	3530	mg/L	D	8		E300.0	04/13/15 22:31 / wc
PHYSICAL PROPERTIES							
pH	6.56	s.u.	H	0.01		A4500-H B	04/10/15 12:10 / lmc
Solids, Total Dissolved TDS @ 180 C	6970	mg/L		100		A2540 C	04/10/15 12:43 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 22:39 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 22:39 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:43 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 21:43 / clm
Lead	0.002	mg/L		0.001		E200.8	04/21/15 21:43 / clm
Manganese	1.65	mg/L		0.01		E200.7	04/15/15 22:39 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 22:39 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 22:39 / sf
Uranium	0.106	mg/L		0.0003		E200.8	04/21/15 21:43 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 22:39 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 14:46 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:49 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L	U			E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Lead 210	0.2	pCi/L	U			E909.0	04/22/15 22:17 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/22/15 22:17 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/22/15 22:17 / eli-cs
Radium 226	0.44	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.17	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.77	pCi/L	U			RA-05	04/16/15 09:30 / plj
Radium 228 precision (±)	0.67	pCi/L				RA-05	04/16/15 09:30 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/16/15 09:30 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-004
Client Sample ID: 808

Report Date: 05/18/15
Collection Date: 04/06/15 11:35
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.1	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.38	%				A1030 E	04/15/15 09:04 / kbh
Anions	117	meq/L				A1030 E	04/15/15 09:04 / kbh
Cations	114	meq/L				A1030 E	04/15/15 09:04 / kbh
Solids, Total Dissolved Calculated	6800	mg/L				A1030 E	04/15/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	04/15/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 19:37 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 19:37 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 19:37 / jlr
Chloroform	2.61	ug/L		0.50		E624	04/13/15 19:37 / jlr
Trihalomethanes, Total	2.61	ug/L		0.50		E624	04/13/15 19:37 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/13/15 19:37 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/13/15 19:37 / jlr
Surr: p-Bromofluorobenzene	98.0	%REC		67.1-133		E624	04/13/15 19:37 / jlr
Surr: Toluene-d8	108	%REC		79.7-125		E624	04/13/15 19:37 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		808	808	808	808
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-004	C15010153-004	C14100513-004	C14070373-004
Bicarbonate as HCO3	mg/L	2100	2000	2090	2160
Calcium	mg/L	669	656	669	673
Chloride	mg/L	212	180	182	181
Magnesium	mg/L	790	731	725	761
Nitrogen, Ammonia as N	mg/L	0.78	0.85	1.73	0.11
Nitrogen, Nitrate+Nitrite as N	mg/L	45	39	31	56
Potassium	mg/L	7	8	8	6
Sodium	mg/L	346	350	356	328
Sulfate	mg/L	3530	3180	3220	3430
pH	s.u.	6.56	6.65	6.60	6.60
Solids, Total Dissolved TDS @ 180 C	mg/L	6970	6970	6750	7140
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.002	0.001	0.002	0.002
Manganese	mg/L	1.65	1.64	1.71	1.42
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.106	0.113	0.0980	0.113
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.5 *	0.4	0.4	0.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.1	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.2	0.9	0.2	0.2
Lead 210 precision (±)	pCi/L	0.8	0.9	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.44	0.52	0.33	0.06
Radium 226 precision (±)	pCi/L	0.17	0.17	0.16	0.10
Radium 226 MDC	pCi/L	0.20	0.18	0.20	0.16
Radium 228	pCi/L	0.77	0.80	1.1	0.32
Radium 228 precision (±)	pCi/L	0.67	0.76	1.0	0.72
Radium 228 MDC	pCi/L	1.0	1.2	1.7	1.2
Thorium 230	pCi/L	0.06	-0.008	-0.004	-0.005
Thorium 230 precision (±)	pCi/L	0.1	0.05	0.06	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	-1.38	0.81	0	-2.17
Anions	meq/L	117	107	109	116
Cations	meq/L	114	108	109	111
Solids, Total Dissolved Calculated	mg/L	6800	6300	6400	6700
TDS Balance (0.80 - 1.20)		1.03	1.11	1.06	1.07
Trihalomethanes, Total	ug/L	2.61	1.78	1.85	2.90

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-009
Client Sample ID: GW-1

Report Date: 02/27/15
Collection Date: 01/05/15 15:10
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1920	mg/L		5		A2320 B	01/08/15 20:06 / wc
Calcium	753	mg/L		1		E200.7	01/20/15 18:36 / sf
Chloride	235	mg/L	D	2		E300.0	01/09/15 09:42 / wc
Magnesium	623	mg/L		1		E200.7	01/20/15 18:36 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/13/15 15:34 / lr
Nitrogen, Nitrate+Nitrite as N	88	mg/L	D	2		E353.2	01/12/15 12:41 / lr
Potassium	9	mg/L		1		E200.7	01/20/15 18:36 / sf
Sodium	446	mg/L		1		E200.7	01/20/15 18:36 / sf
Sulfate	2790	mg/L	D	8		E300.0	01/09/15 09:42 / wc
PHYSICAL PROPERTIES							
pH	6.73	s.u.	H	0.01		A4500-H B	01/08/15 15:08 / alp
Solids, Total Dissolved TDS @ 180 C	6530	mg/L		100		A2540 C	01/08/15 14:55 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 01:35 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:48 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:35 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 01:35 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:35 / clm
Manganese	0.21	mg/L		0.01		E200.8	01/13/15 01:35 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:35 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:35 / clm
Uranium	0.108	mg/L		0.0003		E200.8	01/13/15 01:35 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:35 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 15:05 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:20 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.2	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.2	pCi/L	U			E909.0	01/22/15 04:27 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 04:27 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 04:27 / eli-cs
Radium 226	0.47	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 228	1.5	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.93	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.1	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.03	pCi/L	U			E908.0	01/20/15 09:29 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/20/15 09:29 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:29 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-009
Client Sample ID: GW-1

Report Date: 02/27/15
Collection Date: 01/05/15 15:10
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	0.55	%				A1030 E	01/13/15 07:09 / kbh
Anions	102	meq/L				A1030 E	01/13/15 07:09 / kbh
Cations	103	meq/L				A1030 E	01/13/15 07:09 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	01/13/15 07:09 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	01/13/15 07:09 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 07:11 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 07:11 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 07:11 / jlr
Chloroform	3.14	ug/L		0.50		E624	01/09/15 07:11 / jlr
Trihalomethanes, Total	3.14	ug/L		0.50		E624	01/09/15 07:11 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	01/09/15 07:11 / jlr
Surr: Dibromofluoromethane	117	%REC		64.4-131		E624	01/09/15 07:11 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	01/09/15 07:11 / jlr
Surr: Toluene-d8	105	%REC		79.7-125		E624	01/09/15 07:11 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-009
Client Sample ID: GW-1

Report Date: 05/18/15
Collection Date: 04/06/15 15:35
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1950	mg/L		5		A2320 B	04/10/15 18:31 / wc
Calcium	600	mg/L		1		E200.7	04/13/15 20:14 / sf
Chloride	258	mg/L	D	2		E300.0	04/14/15 00:03 / wc
Magnesium	594	mg/L		1		E200.7	04/13/15 20:14 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/15 16:00 / lr
Nitrogen, Nitrate+Nitrite as N	86	mg/L	D	5		E353.2	04/14/15 12:37 / lr
Potassium	8	mg/L		1		E200.7	04/13/15 20:14 / sf
Sodium	407	mg/L		1		E200.7	04/13/15 20:14 / sf
Sulfate	2910	mg/L	D	8		E300.0	04/14/15 00:03 / wc
PHYSICAL PROPERTIES							
pH	6.67	s.u.	H	0.01		A4500-H B	04/10/15 12:31 / lmc
Solids, Total Dissolved TDS @ 180 C	6500	mg/L		100		A2540 C	04/10/15 12:44 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:08 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:08 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:26 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:26 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:26 / smm
Manganese	0.18	mg/L		0.01		E200.7	04/15/15 23:08 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:08 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:08 / sf
Uranium	0.0960	mg/L		0.0003		E200.8	04/16/15 23:26 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:08 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 15:46 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:03 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.0	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	-0.2	pCi/L	U			E909.0	04/23/15 06:52 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 06:52 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 06:52 / eli-cs
Radium 226	0.48	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.17	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.19	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.78	pCi/L	U			RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.64	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-009
Client Sample ID: GW-1

Report Date: 05/18/15
Collection Date: 04/06/15 15:35
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	04/16/15 09:55 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/16/15 09:55 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:55 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-4.38	%				A1030 E	04/15/15 09:04 / kbh
Anions	106	meq/L				A1030 E	04/15/15 09:04 / kbh
Cations	96.7	meq/L				A1030 E	04/15/15 09:04 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	04/15/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/15/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 22:32 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 22:32 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 22:32 / jlr
Chloroform	2.98	ug/L		0.50		E624	04/13/15 22:32 / jlr
Trihalomethanes, Total	2.98	ug/L		0.50		E624	04/13/15 22:32 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/13/15 22:32 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	04/13/15 22:32 / jlr
Surr: p-Bromofluorobenzene	99.0	%REC		67.1-133		E624	04/13/15 22:32 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	04/13/15 22:32 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-1	GW-1	GW-1	GW-1
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-009	C15010153-009	C14100513-009	C14070373-009
Bicarbonate as HCO3	mg/L	1950	1920	1740	1420
Calcium	mg/L	600	753	590	728
Chloride	mg/L	258	235	248	238
Magnesium	mg/L	594	623	560	545
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	86	88	87	87
Potassium	mg/L	8	9	7	8
Sodium	mg/L	407	446	397	420
Sulfate	mg/L	2910	2790	2790	2770
pH	s.u.	6.67	6.73	6.74	6.87
Solids, Total Dissolved TDS @ 180 C	mg/L	6500	6530	6130	5750
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.18	0.21	0.07	0.12
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0960	0.108	0.102	0.0844
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.0 *	1.2 *	0.6	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.3	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.2	0.2	0.2	0.4
Lead 210 precision (±)	pCi/L	0.7	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.48	0.47	0.31	0.16
Radium 226 precision (±)	pCi/L	0.17	0.16	0.15	0.11
Radium 226 MDC	pCi/L	0.19	0.17	0.18	0.15
Radium 228	pCi/L	0.78	1.5	0.96	0.35
Radium 228 precision (±)	pCi/L	0.64	0.93	0.97	0.70
Radium 228 MDC	pCi/L	1.0	1.1	1.5	1.1
Thorium 230	pCi/L	0.03	0.03	0.003	0.009
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.08	0.06
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-4.38	0.55	-1.61	2.99
Anions	meq/L	106	102	96.0	93.8
Cations	meq/L	96.7	103	93.0	99.6
Solids, Total Dissolved Calculated	mg/L	6100	6100	5600	5800
TDS Balance (0.80 - 1.20)		1.06	1.07	1.09	0.99
Trihalomethanes, Total	ug/L	2.98	3.14	2.20	1.18

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-008
Client Sample ID: GW-2

Report Date: 02/27/15
Collection Date: 01/05/15 14:15
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2180	mg/L		5		A2320 B	01/08/15 19:55 / wc
Calcium	595	mg/L		1		E200.7	01/20/15 18:33 / sf
Chloride	197	mg/L	D	5		E300.0	01/09/15 09:25 / wc
Magnesium	1230	mg/L		1		E200.7	01/20/15 18:33 / sf
Nitrogen, Ammonia as N	3.76	mg/L		0.05		A4500-NH3 G	01/09/15 12:55 / lr
Nitrogen, Nitrate+Nitrite as N	16	mg/L	D	1		E353.2	01/12/15 12:39 / lr
Potassium	22	mg/L		1		E200.7	01/20/15 18:33 / sf
Sodium	419	mg/L	D	2		E200.7	01/20/15 18:33 / sf
Sulfate	4580	mg/L	D	20		E300.0	01/09/15 09:25 / wc
PHYSICAL PROPERTIES							
pH	6.53	s.u.	H	0.01		A4500-H B	01/08/15 15:05 / alp
Solids, Total Dissolved TDS @ 180 C	9030	mg/L		100		A2540 C	01/08/15 14:55 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 01:31 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:44 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:31 / clm
Cobalt	0.01	mg/L		0.01		E200.8	01/13/15 01:31 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:31 / clm
Manganese	1.50	mg/L		0.01		E200.8	01/13/15 01:31 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:31 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:31 / clm
Uranium	0.0861	mg/L		0.0003		E200.8	01/13/15 01:31 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:31 / clm
METALS - SPECIATED							
Arsenic-III	0.001	mg/L		0.001		E1632AM	01/20/15 14:53 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:18 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.0	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.9	pCi/L	U			E909.0	01/22/15 02:50 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 02:50 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 02:50 / eli-cs
Radium 226	0.40	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 precision (±)	0.20	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 MDC	0.25	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 228	1.1	pCi/L	U			RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.73	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.6	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	-0.008	pCi/L	U			E908.0	01/20/15 09:29 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/20/15 09:29 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:29 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-008
Client Sample ID: GW-2

Report Date: 02/27/15
Collection Date: 01/05/15 14:15
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	2.02	%				A1030 E	01/13/15 07:09 / kbh
Anions	138	meq/L				A1030 E	01/13/15 07:09 / kbh
Cations	143	meq/L				A1030 E	01/13/15 07:09 / kbh
Solids, Total Dissolved Calculated	8100	mg/L				A1030 E	01/13/15 07:09 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	01/13/15 07:09 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 06:35 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 06:35 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 06:35 / jlr
Chloroform	6.16	ug/L		0.50		E624	01/09/15 06:35 / jlr
Trihalomethanes, Total	6.16	ug/L		0.50		E624	01/09/15 06:35 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	01/09/15 06:35 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/09/15 06:35 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	01/09/15 06:35 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/09/15 06:35 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-008
Client Sample ID: GW-2

Report Date: 05/18/15
Collection Date: 04/06/15 14:40
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	2160	mg/L		5		A2320 B	04/10/15 18:19 / wc
Calcium	428	mg/L		1		E200.7	04/13/15 20:10 / sf
Chloride	239	mg/L	D	5		E300.0	04/17/15 01:07 / wc
Magnesium	1160	mg/L		1		E200.7	04/13/15 20:10 / sf
Nitrogen, Ammonia as N	4.57	mg/L		0.05		A4500-NH3 G	04/10/15 15:53 / lr
Nitrogen, Nitrate+Nitrite as N	16.8	mg/L	D	0.5		E353.2	04/14/15 12:35 / lr
Potassium	19	mg/L		1		E200.7	04/13/15 20:10 / sf
Sodium	374	mg/L	D	2		E200.7	04/13/15 20:10 / sf
Sulfate	4920	mg/L	D	20		E300.0	04/17/15 01:07 / wc
PHYSICAL PROPERTIES							
pH	6.45	s.u.	H	0.01		A4500-H B	04/10/15 12:24 / lmc
Solids, Total Dissolved TDS @ 180 C	8860	mg/L		100		A2540 C	04/10/15 12:44 / lmc
METALS - TOTAL							
Aluminum	0.1	mg/L		0.1		E200.7	04/16/15 21:11 / sf
Beryllium	ND	mg/L		0.001		E200.8	04/16/15 23:23 / smm
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:23 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:23 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:23 / smm
Manganese	1.26	mg/L		0.01		E200.7	04/15/15 23:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:04 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:04 / sf
Uranium	0.0687	mg/L		0.0003		E200.8	04/16/15 23:23 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:04 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 15:34 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:02 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.0	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	-0.3	pCi/L	U			E909.0	04/23/15 05:09 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 05:09 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 05:09 / eli-cs
Radium 226	0.45	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.26	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.30	pCi/L	U			RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.82	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-008
Client Sample ID: GW-2

Report Date: 05/18/15
Collection Date: 04/06/15 14:40
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	04/16/15 09:55 / cng
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/16/15 09:55 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:55 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-4.92	%				A1030 E	04/24/15 10:48 / kbh
Anions	147	meq/L				A1030 E	04/24/15 10:48 / kbh
Cations	134	meq/L				A1030 E	04/24/15 10:48 / kbh
Solids, Total Dissolved Calculated	8400	mg/L				A1030 E	04/24/15 10:48 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/24/15 10:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 21:57 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 21:57 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 21:57 / jlr
Chloroform	6.64	ug/L		0.50		E624	04/13/15 21:57 / jlr
Trihalomethanes, Total	6.64	ug/L		0.50		E624	04/13/15 21:57 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/13/15 21:57 / jlr
Surr: Dibromofluoromethane	119	%REC		64.4-131		E624	04/13/15 21:57 / jlr
Surr: p-Bromofluorobenzene	103	%REC		67.1-133		E624	04/13/15 21:57 / jlr
Surr: Toluene-d8	112	%REC		79.7-125		E624	04/13/15 21:57 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-2	GW-2	GW-2	GW-2
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-008	C15010153-008	C14100513-008	C14070373-008
Bicarbonate as HCO3	mg/L	2160	2180	2210	1940
Calcium	mg/L	428	595	574	551
Chloride	mg/L	239	197	201	200
Magnesium	mg/L	1160	1230	1200	1120
Nitrogen, Ammonia as N	mg/L	4.57	3.76	5.5	4.66
Nitrogen, Nitrate+Nitrite as N	mg/L	16.8	16	14	14
Potassium	mg/L	19	22	19	20
Sodium	mg/L	374	419	389	378
Sulfate	mg/L	4920	4580	4840	4870
pH	s.u.	6.45	6.53	6.43	6.56
Solids, Total Dissolved TDS @ 180 C	mg/L	8860	9030	8790	8680
Aluminum	mg/L	0.1	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	0.01	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.26	1.50	1.54	1.57
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0687	0.0861	0.0867	0.0710
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.0 *	1.0 *	0.4	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.3	1.2	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.3	0.9	0.9	-0.009
Lead 210 precision (±)	pCi/L	0.7	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.45	0.40	0.28	0.22
Radium 226 precision (±)	pCi/L	0.20	0.20	0.18	0.12
Radium 226 MDC	pCi/L	0.26	0.25	0.23	0.16
Radium 228	pCi/L	0.30	1.1	0.77	1.1
Radium 228 precision (±)	pCi/L	0.82	0.73	1.2	0.77
Radium 228 MDC	pCi/L	1.4	1.6	2.0	1.2
Thorium 230	pCi/L	-0.01	-0.008	-0.05	0.05
Thorium 230 precision (±)	pCi/L	0.09	0.05	0.08	0.08
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.2
A/C Balance (± 5)	%	-4.92	2.02	0.49	-0.90
Anions	meq/L	147	138	144	140
Cations	meq/L	134	143	145	137
Solids, Total Dissolved Calculated	mg/L	8400	8100	8400	8200
TDS Balance (0.80 - 1.20)		1.06	1.12	1.05	1.06
Trihalomethanes, Total	ug/L	6.64	6.16	6.04	3.43

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-003
Client Sample ID: GW-3

Report Date: 02/27/15
Collection Date: 01/06/15 11:30
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1740	mg/L		5		A2320 B	01/09/15 17:00 / wc
Calcium	856	mg/L		1		E200.7	01/12/15 18:47 / sf
Chloride	187	mg/L	D	2		E300.0	01/10/15 00:00 / wc
Magnesium	304	mg/L		1		E200.7	01/12/15 18:47 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:02 / lr
Nitrogen, Nitrate+Nitrite as N	84	mg/L	D	2		E353.2	01/12/15 13:46 / lr
Potassium	8	mg/L		1		E200.7	01/12/15 18:47 / sf
Sodium	290	mg/L		1		E200.7	01/12/15 18:47 / sf
Sulfate	2330	mg/L	D	8		E300.0	01/10/15 00:00 / wc
PHYSICAL PROPERTIES							
pH	6.64	s.u.	H	0.01		A4500-H B	01/09/15 13:34 / alp
Solids, Total Dissolved TDS @ 180 C	5460	mg/L		40		A2540 C	01/09/15 12:46 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:28 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:28 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 23:28 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 23:28 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:28 / clm
Manganese	1.25	mg/L		0.01		E200.7	01/14/15 14:28 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:28 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:28 / sf
Uranium	0.392	mg/L		0.0003		E200.8	01/14/15 23:28 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:28 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 17:25 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:34 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.2	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	-0.3	pCi/L	U			E909.0	01/23/15 08:57 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 08:57 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 08:57 / eli-cs
Radium 226	0.11	pCi/L	U			E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.11	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	0.43	pCi/L	U			RA-05	01/21/15 11:39 / plj
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/21/15 11:39 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	01/21/15 11:39 / plj
Thorium 230	0.01	pCi/L	U			E908.0	01/19/15 15:54 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/19/15 15:54 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/19/15 15:54 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-003
Client Sample ID: GW-3

Report Date: 02/27/15
Collection Date: 01/06/15 11:30
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-4.71	%				A1030 E	01/16/15 07:35 / kbh
Anions	88.5	meq/L				A1030 E	01/16/15 07:35 / kbh
Cations	80.6	meq/L				A1030 E	01/16/15 07:35 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	01/16/15 07:35 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/16/15 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 22:37 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 22:37 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 22:37 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 22:37 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 22:37 / jlr
Surr: 1,2-Dichlorobenzene-d4	124	%REC		73.7-126		E624	01/14/15 22:37 / jlr
Surr: Dibromofluoromethane	124	%REC		64.4-131		E624	01/14/15 22:37 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/14/15 22:37 / jlr
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	01/14/15 22:37 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-003
Client Sample ID: GW-3

Report Date: 05/19/15
Collection Date: 04/07/15 10:42
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1790	mg/L		5		A2320 B	04/10/15 21:26 / wc
Calcium	903	mg/L		1		E200.7	04/15/15 21:36 / sf
Chloride	178	mg/L	D	2		E300.0	04/15/15 06:03 / wc
Magnesium	308	mg/L		1		E200.7	04/14/15 16:46 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:18 / lr
Nitrogen, Nitrate+Nitrite as N	85	mg/L	D	5		E353.2	04/14/15 13:42 / lr
Potassium	9	mg/L		1		E200.7	04/14/15 16:46 / sf
Sodium	296	mg/L		1		E200.7	04/14/15 16:46 / sf
Sulfate	2250	mg/L	D	8		E300.0	04/15/15 06:03 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	04/13/15 10:29 / lmc
Solids, Total Dissolved TDS @ 180 C	5520	mg/L		40		A2540 C	04/13/15 10:20 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:40 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:40 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:42 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:42 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:42 / smm
Manganese	1.32	mg/L		0.01		E200.7	04/15/15 23:40 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:40 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:40 / sf
Uranium	0.365	mg/L		0.0003		E200.8	04/16/15 23:42 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:40 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 20:11 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:24 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	04/13/15 23:16 / dmf
Lead 210	-0.6	pCi/L	U			E909.0	04/23/15 15:26 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 15:26 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 15:26 / eli-cs
Radium 226	0.31	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 precision (±)	0.13	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 228	0.35	pCi/L	U			RA-05	04/17/15 11:21 / plj
Radium 228 precision (±)	0.77	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/15 11:21 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-003
Client Sample ID: GW-3

Report Date: 05/19/15
Collection Date: 04/07/15 10:42
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 precision (±)	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.16	%				A1030 E	04/20/15 07:50 / kbh
Anions	87.1	meq/L				A1030 E	04/20/15 07:50 / kbh
Cations	83.5	meq/L				A1030 E	04/20/15 07:50 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	04/20/15 07:50 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	04/20/15 07:50 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 19:00 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 19:00 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 19:00 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 19:00 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 19:00 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/13/15 19:00 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	04/13/15 19:00 / jlr
Surr: p-Bromofluorobenzene	109	%REC		67.1-133		E624	04/13/15 19:00 / jlr
Surr: Toluene-d8	103	%REC		79.7-125		E624	04/13/15 19:00 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		GW-3	GW-3	GW-3	GW-3
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040353-003	C15010193-003	C14100552-003	C14070432-003
Bicarbonate as HCO3	mg/L	1790	1740	1680	1780
Calcium	mg/L	903	856	835	864
Chloride	mg/L	178	187	162	165
Magnesium	mg/L	308	304	301	335
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	85	84	84	80
Potassium	mg/L	9	8	8	9
Sodium	mg/L	296	290	297	334
Sulfate	mg/L	2250	2330	2250	2280
pH	s.u.	6.87	6.64	6.63	6.64
Solids, Total Dissolved TDS @ 180 C	mg/L	5520	5460	5400	5500
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	1.1
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.32	1.25	1.22	1.61
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.365	0.392	0.371	0.320
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	0.5 *	1.1 *	-0.03	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.9	1.2	0.3	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1.3	1.8	0.5	0.6
Lead 210	pCi/L	-0.6	-0.3	0.009	-0.3
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.31	0.11	0.18	0.24
Radium 226 precision (±)	pCi/L	0.13	0.11	0.14	0.12
Radium 226 MDC	pCi/L	0.15	0.16	0.19	0.16
Radium 228	pCi/L	0.35	0.43	1.6	0.14
Radium 228 precision (±)	pCi/L	0.77	0.68	0.91	0.84
Radium 228 MDC	pCi/L	1.3	1.1	1.4	1.4
Thorium 230	pCi/L	0.3	0.01	0.03	0.01
Thorium 230 precision (±)	pCi/L	0.2	0.06	0.08	0.03
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.08
A/C Balance (± 5)	%	-2.16	-4.71	-3.16	-0.91
Anions	meq/L	87.1	88.5	84.8	87.0
Cations	meq/L	83.5	80.6	79.6	85.5
Solids, Total Dissolved Calculated	mg/L	5200	5200	5100	5200
TDS Balance (0.80 - 1.20)		1.06	1.04	1.07	1.05
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-002
Client Sample ID: EPA-23

Report Date: 02/27/15
Collection Date: 01/05/15 09:32
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1260	mg/L		5		A2320 B	01/08/15 17:58 / wc
Calcium	666	mg/L		1		E200.7	01/09/15 15:07 / sf
Chloride	100	mg/L	D	2		E300.0	01/08/15 23:13 / wc
Magnesium	386	mg/L		1		E200.7	01/09/15 15:07 / sf
Nitrogen, Ammonia as N	0.87	mg/L		0.05		A4500-NH3 G	01/09/15 12:45 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/09/15 16:12 / lr
Potassium	11	mg/L		1		E200.7	01/09/15 15:07 / sf
Sodium	154	mg/L		1		E200.7	01/09/15 15:07 / sf
Sulfate	2240	mg/L	D	8		E300.0	01/08/15 23:13 / wc
PHYSICAL PROPERTIES							
pH	6.79	s.u.	H	0.01		A4500-H B	01/08/15 14:43 / alp
Solids, Total Dissolved TDS @ 180 C	4670	mg/L		40		A2540 C	01/08/15 14:53 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 00:46 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/13/15 00:46 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 00:46 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 00:46 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 00:46 / clm
Manganese	5.84	mg/L		0.01		E200.8	01/13/15 00:46 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 00:46 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 00:46 / clm
Uranium	0.0311	mg/L		0.0003		E200.8	01/13/15 00:46 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 00:46 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 13:41 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	01/23/15 11:06 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.3	pCi/L	U			E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U Precision (±)	1.0	pCi/L				E900.1	01/14/15 18:59 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 18:59 / dmf
Lead 210	0.2	pCi/L	U			E909.0	01/21/15 17:41 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/21/15 17:41 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/21/15 17:41 / eli-cs
Radium 226	0.27	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 precision (±)	0.14	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/19/15 10:07 / rdw
Radium 228	1.8	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 precision (±)	0.81	pCi/L				RA-05	01/14/15 10:51 / rdw
Radium 228 MDC	1.2	pCi/L				RA-05	01/14/15 10:51 / rdw
Thorium 230	0.04	pCi/L	U			E908.0	01/20/15 09:28 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/20/15 09:28 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:28 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-002
Client Sample ID: EPA-23

Report Date: 02/27/15
Collection Date: 01/05/15 09:32
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.33	%				A1030 E	01/13/15 07:07 / kbh
Anions	70.1	meq/L				A1030 E	01/13/15 07:07 / kbh
Cations	72.0	meq/L				A1030 E	01/13/15 07:07 / kbh
Solids, Total Dissolved Calculated	4200	mg/L				A1030 E	01/13/15 07:07 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	01/13/15 07:07 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/08/15 23:34 / jlr
Bromoform	ND	ug/L		0.50		E624	01/08/15 23:34 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/08/15 23:34 / jlr
Chloroform	ND	ug/L		0.50		E624	01/08/15 23:34 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/08/15 23:34 / jlr
Surr: 1,2-Dichlorobenzene-d4	103	%REC		73.7-126		E624	01/08/15 23:34 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	01/08/15 23:34 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/08/15 23:34 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	01/08/15 23:34 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-002
Client Sample ID: EPA-23

Report Date: 05/18/15
Collection Date: 04/06/15 10:03
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1320	mg/L		5		A2320 B	04/10/15 16:54 / wc
Calcium	674	mg/L		1		E200.7	04/13/15 19:34 / sf
Chloride	120	mg/L		1		E300.0	04/13/15 21:17 / wc
Magnesium	391	mg/L		1		E200.7	04/13/15 19:34 / sf
Nitrogen, Ammonia as N	0.73	mg/L		0.05		A4500-NH3 G	04/10/15 15:43 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/10/15 12:24 / lr
Potassium	11	mg/L		1		E200.7	04/13/15 19:34 / sf
Sodium	153	mg/L		1		E200.7	04/13/15 19:34 / sf
Sulfate	2320	mg/L	D	4		E300.0	04/13/15 21:17 / wc
PHYSICAL PROPERTIES							
pH	6.72	s.u.	H	0.01		A4500-H B	04/10/15 12:02 / lmc
Solids, Total Dissolved TDS @ 180 C	4640	mg/L		40		A2540 C	04/10/15 12:42 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 21:51 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 21:51 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 21:37 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 21:37 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 21:37 / clm
Manganese	5.69	mg/L		0.01		E200.7	04/15/15 21:51 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 21:51 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 21:51 / sf
Uranium	0.0321	mg/L		0.0003		E200.8	04/21/15 21:37 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 21:51 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 14:22 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 14:46 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.1	pCi/L	U			E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.5	pCi/L				E900.1	04/15/15 13:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:16 / trs
Lead 210	0.4	pCi/L	U			E909.0	04/22/15 18:52 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/22/15 18:52 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/22/15 18:52 / eli-cs
Radium 226	0.46	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.18	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.49	pCi/L	U			RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.65	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-002
Client Sample ID: EPA-23

Report Date: 05/18/15
Collection Date: 04/06/15 10:03
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.01	pCi/L	U			E908.0	04/16/15 09:54 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/16/15 09:54 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:54 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.29	%				A1030 E	04/15/15 09:03 / kbh
Anions	73.2	meq/L				A1030 E	04/15/15 09:03 / kbh
Cations	72.8	meq/L				A1030 E	04/15/15 09:03 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	04/15/15 09:03 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/15/15 09:03 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 18:27 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 18:27 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 18:27 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 18:27 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 18:27 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/13/15 18:27 / jlr
Surr: Dibromofluoromethane	121	%REC		64.4-131		E624	04/13/15 18:27 / jlr
Surr: p-Bromofluorobenzene	98.0	%REC		67.1-133		E624	04/13/15 18:27 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	04/13/15 18:27 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-23	EPA-23	EPA-23	EPA-23
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-002	C15010153-002	C14100513-002	C14070373-002
Bicarbonate as HCO3	mg/L	1320	1260	1300	1290
Calcium	mg/L	674	666	669	655
Chloride	mg/L	120	100	102	102
Magnesium	mg/L	391	386	390	368
Nitrogen, Ammonia as N	mg/L	0.73	0.87	0.90	0.60
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	11	11	11	11
Sodium	mg/L	153	154	152	142
Sulfate	mg/L	2320	2240	2330	2360
pH	s.u.	6.72	6.79	6.75	6.79
Solids, Total Dissolved TDS @ 180 C	mg/L	4640	4670	4670	4600
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.69	5.84	5.77	5.92
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0321	0.0311	0.0313	0.0274
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	0.002	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.1 *	-0.3 *	0.4	-0.03
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.5	1.0	0.3	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.4	0.2	0.009	0.6
Lead 210 precision (±)	pCi/L	0.8	0.9	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.46	0.27	0.40	0.39
Radium 226 precision (±)	pCi/L	0.18	0.14	0.17	0.14
Radium 226 MDC	pCi/L	0.20	0.18	0.19	0.15
Radium 228	pCi/L	0.49	1.8	2.7	0.65
Radium 228 precision (±)	pCi/L	0.65	0.81	0.94	0.71
Radium 228 MDC	pCi/L	1.0	1.2	1.3	1.1
Thorium 230	pCi/L	0.01	0.04	0.01	0.03
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.1	0.2
A/C Balance (± 5)	%	-0.29	1.33	-0.17	-2.51
Anions	meq/L	73.2	70.1	72.6	73.1
Cations	meq/L	72.8	72.0	72.4	69.5
Solids, Total Dissolved Calculated	mg/L	4300	4200	4300	4300
TDS Balance (0.80 - 1.20)		1.07	1.11	1.08	1.07
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-004
Client Sample ID: EPA-25

Report Date: 02/27/15
Collection Date: 01/06/15 12:40
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1250	mg/L		5		A2320 B	01/09/15 17:10 / wc
Calcium	716	mg/L		1		E200.7	01/12/15 18:51 / sf
Chloride	144	mg/L	D	2		E300.0	01/10/15 00:15 / wc
Magnesium	227	mg/L		1		E200.7	01/12/15 18:51 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:04 / lr
Nitrogen, Nitrate+Nitrite as N	67	mg/L	D	5		E353.2	01/12/15 13:49 / lr
Potassium	8	mg/L		1		E200.7	01/12/15 18:51 / sf
Sodium	200	mg/L		1		E200.7	01/12/15 18:51 / sf
Sulfate	1880	mg/L	D	8		E300.0	01/10/15 00:15 / wc
PHYSICAL PROPERTIES							
pH	6.77	s.u.	H	0.01		A4500-H B	01/09/15 13:37 / alp
Solids, Total Dissolved TDS @ 180 C	4300	mg/L		30		A2540 C	01/09/15 12:47 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:31 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:31 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 23:31 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 23:31 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:31 / clm
Manganese	0.16	mg/L		0.01		E200.7	01/14/15 14:31 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:31 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:31 / sf
Uranium	0.130	mg/L		0.0003		E200.8	01/14/15 23:31 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:31 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 17:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:35 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	-0.3	pCi/L	U			E909.0	01/23/15 10:06 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 10:06 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 10:06 / eli-cs
Radium 226	0.11	pCi/L	U			E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.11	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	0.0	pCi/L	U			RA-05	01/21/15 11:39 / plj
Radium 228 precision (±)	0.67	pCi/L				RA-05	01/21/15 11:39 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	01/21/15 11:39 / plj
Thorium 230	0.003	pCi/L	U			E908.0	01/19/15 15:55 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	01/19/15 15:55 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 15:55 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-004
Client Sample ID: EPA-25

Report Date: 02/27/15
Collection Date: 01/06/15 12:40
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.96	%				A1030 E	01/16/15 07:35 / kbh
Anions	68.5	meq/L				A1030 E	01/16/15 07:35 / kbh
Cations	63.3	meq/L				A1030 E	01/16/15 07:35 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	01/16/15 07:35 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/16/15 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 23:12 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 23:12 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 23:12 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 23:12 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 23:12 / jlr
Surr: 1,2-Dichlorobenzene-d4	125	%REC		73.7-126		E624	01/14/15 23:12 / jlr
Surr: Dibromofluoromethane	125	%REC		64.4-131		E624	01/14/15 23:12 / jlr
Surr: p-Bromofluorobenzene	120	%REC		67.1-133		E624	01/14/15 23:12 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	01/14/15 23:12 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-004
Client Sample ID: EPA-25

Report Date: 05/19/15
Collection Date: 04/07/15 12:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1350	mg/L		5		A2320 B	04/10/15 21:47 / wc
Calcium	753	mg/L		1		E200.7	04/14/15 16:50 / sf
Chloride	142	mg/L	D	2		E300.0	04/15/15 06:21 / wc
Magnesium	234	mg/L		1		E200.7	04/14/15 16:50 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:23 / lr
Nitrogen, Nitrate+Nitrite as N	65	mg/L	D	5		E353.2	04/14/15 13:45 / lr
Potassium	8	mg/L		1		E200.7	04/14/15 16:50 / sf
Sodium	208	mg/L		1		E200.7	04/14/15 16:50 / sf
Sulfate	1830	mg/L	D	8		E300.0	04/15/15 06:21 / wc
PHYSICAL PROPERTIES							
pH	6.85	s.u.	H	0.01		A4500-H B	04/13/15 10:36 / lmc
Solids, Total Dissolved TDS @ 180 C	4400	mg/L		40		A2540 C	04/13/15 10:21 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/21/15 22:11 / clm
Beryllium	ND	mg/L		0.001		E200.8	04/21/15 22:11 / clm
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 22:11 / clm
Cobalt	ND	mg/L		0.01		E200.8	04/21/15 22:11 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 22:11 / clm
Manganese	0.42	mg/L		0.01		E200.8	04/21/15 22:11 / clm
Molybdenum	ND	mg/L		0.1		E200.8	04/21/15 22:11 / clm
Nickel	ND	mg/L		0.05		E200.8	04/21/15 22:11 / clm
Uranium	0.122	mg/L		0.0003		E200.8	04/21/15 22:11 / clm
Vanadium	ND	mg/L		0.1		E200.8	04/21/15 22:11 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 20:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:26 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.4	pCi/L	U			E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	04/13/15 23:16 / dmf
Lead 210	-0.3	pCi/L	U			E909.0	04/23/15 17:08 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 17:08 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 17:08 / eli-cs
Radium 226	0.24	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 precision (±)	0.13	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 15:45 / plj
Radium 228	-0.006	pCi/L	U			RA-05	04/17/15 11:21 / plj
Radium 228 precision (±)	0.78	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/15 11:21 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-004
Client Sample ID: EPA-25

Report Date: 05/19/15
Collection Date: 04/07/15 12:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.3	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 precision (±)	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 16:12 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.87	%				A1030 E	04/20/15 07:50 / kbh
Anions	68.6	meq/L				A1030 E	04/20/15 07:50 / kbh
Cations	66.1	meq/L				A1030 E	04/20/15 07:50 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	04/20/15 07:50 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/20/15 07:50 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 19:35 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 19:35 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 19:35 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 19:35 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 19:35 / jlr
Surr: 1,2-Dichlorobenzene-d4	111	%REC		73.7-126		E624	04/13/15 19:35 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	04/13/15 19:35 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/13/15 19:35 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/13/15 19:35 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-25	EPA-25	EPA-25	EPA-25
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040353-004	C15010193-004	C14100552-004	C14070432-004
Bicarbonate as HCO3	mg/L	1350	1250	1330	1020
Calcium	mg/L	753	716	766	727
Chloride	mg/L	142	144	120	115
Magnesium	mg/L	234	227	234	251
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	65	67	68	69
Potassium	mg/L	8	8	8	8
Sodium	mg/L	208	200	200	213
Sulfate	mg/L	1830	1880	1880	1810
pH	s.u.	6.85	6.77	6.84	6.89
Solids, Total Dissolved TDS @ 180 C	mg/L	4400	4300	4380	4060
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.42	0.16	0.35	0.27
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.122	0.130	0.128	0.111
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	-0.4 *	0.3 *	0.09	0.05
Gross Alpha minus Rn & U Precision (±)	pCi/L	0.7	1.1	0.3	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1.3	1.8	0.5	0.6
Lead 210	pCi/L	-0.3	-0.3	-0.2	0.06
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.24	0.11	0.09	0.10
Radium 226 precision (±)	pCi/L	0.13	0.11	0.13	0.11
Radium 226 MDC	pCi/L	0.15	0.16	0.20	0.16
Radium 228	pCi/L	-0.006	0.0	1.1	0.94
Radium 228 precision (±)	pCi/L	0.78	0.67	0.94	0.76
Radium 228 MDC	pCi/L	1.3	1.1	1.5	1.2
Thorium 230	pCi/L	0.3	0.003	0.04	0.04
Thorium 230 precision (±)	pCi/L	0.2	0.04	0.09	0.04
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.07
A/C Balance (± 5)	%	-1.87	-3.96	-2.15	3.32
Anions	meq/L	68.6	68.5	69.2	62.2
Cations	meq/L	66.1	63.3	66.3	66.4
Solids, Total Dissolved Calculated	mg/L	4100	4100	4200	3900
TDS Balance (0.80 - 1.20)		1.07	1.05	1.05	1.03
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-010
Client Sample ID: EPA-28

Report Date: 02/27/15
Collection Date: 01/05/15 16:02
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	437	mg/L		5		A2320 B	01/08/15 20:15 / wc
Calcium	500	mg/L		1		E200.7	01/09/15 15:58 / sf
Chloride	100	mg/L	D	2		E300.0	01/09/15 10:00 / wc
Magnesium	462	mg/L		1		E200.7	01/09/15 15:58 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:24 / lr
Nitrogen, Nitrate+Nitrite as N	12	mg/L	D	1		E353.2	01/12/15 12:44 / lr
Potassium	11	mg/L		1		E200.7	01/09/15 15:58 / sf
Sodium	255	mg/L		1		E200.7	01/09/15 15:58 / sf
Sulfate	2930	mg/L	D	8		E300.0	01/09/15 10:00 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	01/08/15 15:11 / alp
Solids, Total Dissolved TDS @ 180 C	5020	mg/L		40		A2540 C	01/08/15 14:56 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 01:38 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:51 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:38 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 01:38 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:38 / clm
Manganese	0.15	mg/L		0.01		E200.8	01/13/15 01:38 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:38 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:38 / clm
Uranium	0.0279	mg/L		0.0003		E200.8	01/13/15 01:38 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:38 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/20/15 15:17 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:21 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L	U			E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.8	pCi/L	U			E909.0	01/22/15 05:59 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 05:59 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 05:59 / eli-cs
Radium 226	0.66	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 precision (±)	0.19	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 MDC	0.19	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 228	0.65	pCi/L	U			RA-05	01/14/15 12:23 / rdw
Radium 228 precision (±)	0.90	pCi/L				RA-05	01/14/15 12:23 / rdw
Radium 228 MDC	1.5	pCi/L				RA-05	01/14/15 12:23 / rdw
Thorium 230	-0.004	pCi/L	U			E908.0	01/20/15 09:29 / dmf
Thorium 230 precision (±)	0.04	pCi/L				E908.0	01/20/15 09:29 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/20/15 09:29 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-010
Client Sample ID: EPA-28

Report Date: 02/27/15
Collection Date: 01/05/15 16:02
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.82	%				A1030 E	01/13/15 07:09 / kbh
Anions	71.7	meq/L				A1030 E	01/13/15 07:09 / kbh
Cations	74.4	meq/L				A1030 E	01/13/15 07:09 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	01/13/15 07:09 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	01/13/15 07:09 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 07:46 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 07:46 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 07:46 / jlr
Chloroform	ND	ug/L		0.50		E624	01/09/15 07:46 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/09/15 07:46 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	01/09/15 07:46 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	01/09/15 07:46 / jlr
Surr: p-Bromofluorobenzene	109	%REC		67.1-133		E624	01/09/15 07:46 / jlr
Surr: Toluene-d8	104	%REC		79.7-125		E624	01/09/15 07:46 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-010
Client Sample ID: EPA-28

Report Date: 05/18/15
Collection Date: 04/06/15 16:20
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	715	mg/L		5		A2320 B	04/10/15 18:39 / wc
Calcium	526	mg/L		1		E200.7	04/13/15 20:26 / sf
Chloride	129	mg/L	D	2		E300.0	04/14/15 00:21 / wc
Magnesium	480	mg/L		1		E200.7	04/13/15 20:26 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/15 16:05 / lr
Nitrogen, Nitrate+Nitrite as N	12.7	mg/L	D	0.5		E353.2	04/14/15 12:40 / lr
Potassium	11	mg/L		1		E200.7	04/13/15 20:26 / sf
Sodium	227	mg/L		1		E200.7	04/13/15 20:26 / sf
Sulfate	3020	mg/L	D	8		E300.0	04/14/15 00:21 / wc
PHYSICAL PROPERTIES							
pH	6.78	s.u.	H	0.01		A4500-H B	04/10/15 12:34 / lmc
Solids, Total Dissolved TDS @ 180 C	5090	mg/L		40		A2540 C	04/10/15 12:45 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:12 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:12 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:29 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:29 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:29 / smm
Manganese	0.74	mg/L		0.01		E200.7	04/15/15 23:12 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:12 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:12 / sf
Uranium	0.0403	mg/L		0.0003		E200.8	04/16/15 23:29 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:12 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/23/15 15:58 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:05 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.4	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	0.5	pCi/L	U			E909.0	04/23/15 08:34 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/23/15 08:34 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 08:34 / eli-cs
Radium 226	0.71	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	1.4	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 precision (±)	0.89	pCi/L				RA-05	04/16/15 09:31 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/16/15 09:31 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-010
Client Sample ID: EPA-28

Report Date: 05/18/15
Collection Date: 04/06/15 16:20
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	04/16/15 09:55 / cng
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/16/15 09:55 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 09:55 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.32	%				A1030 E	04/15/15 09:04 / kbh
Anions	79.5	meq/L				A1030 E	04/15/15 09:04 / kbh
Cations	75.9	meq/L				A1030 E	04/15/15 09:04 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	04/15/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/15/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 03:11 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 03:11 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 03:11 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 03:11 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 03:11 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/14/15 03:11 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	04/14/15 03:11 / jlr
Surr: p-Bromofluorobenzene	99.0	%REC		67.1-133		E624	04/14/15 03:11 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	04/14/15 03:11 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-010	C15010153-010	C14100513-010	C14070373-010
Bicarbonate as HCO3	mg/L	715	437	724	777
Calcium	mg/L	526	500	498	534
Chloride	mg/L	129	100	117	114
Magnesium	mg/L	480	462	461	462
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	12.7	12	23	26
Potassium	mg/L	11	11	11	12
Sodium	mg/L	227	255	231	221
Sulfate	mg/L	3020	2930	2920	2840
pH	s.u.	6.78	6.87	6.84	6.86
Solids, Total Dissolved TDS @ 180 C	mg/L	5090	5020	5010	5010
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.74	0.15	0.72	0.79
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0403	0.0279	0.0452	0.0388
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.4 *	1.7 *	1	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.3	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.5	0.8	0.5	1.1
Lead 210 precision (±)	pCi/L	0.8	0.9	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.71	0.66	0.64	0.48
Radium 226 precision (±)	pCi/L	0.20	0.19	0.20	0.15
Radium 226 MDC	pCi/L	0.20	0.19	0.19	0.15
Radium 228	pCi/L	1.4	0.65	1.2	0.93
Radium 228 precision (±)	pCi/L	0.89	0.90	1.0	0.73
Radium 228 MDC	pCi/L	1.0	1.5	1.6	1.1
Thorium 230	pCi/L	0.04	-0.004	0.01	0.04
Thorium 230 precision (±)	pCi/L	0.08	0.04	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	-2.32	1.82	-2.97	-1.40
Anions	meq/L	79.5	71.7	77.6	76.7
Cations	meq/L	75.9	74.4	73.1	74.6
Solids, Total Dissolved Calculated	mg/L	4800	4500	4700	4700
TDS Balance (0.80 - 1.20)		1.05	1.11	1.06	1.07
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-002
Client Sample ID: SBL-1

Report Date: 02/27/15
Collection Date: 01/06/15 10:25
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	437	mg/L		5		A2320 B	01/09/15 16:49 / wc
Calcium	483	mg/L		1		E200.7	01/12/15 18:43 / sf
Chloride	94	mg/L	D	5		E300.0	01/09/15 23:44 / wc
Magnesium	1170	mg/L		1		E200.7	01/12/15 18:43 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:00 / lr
Nitrogen, Nitrate+Nitrite as N	38	mg/L	D	2		E353.2	01/12/15 13:39 / lr
Potassium	13	mg/L		1		E200.7	01/12/15 18:43 / sf
Sodium	278	mg/L		1		E200.7	01/12/15 18:43 / sf
Sulfate	6180	mg/L	D	20		E300.0	01/09/15 23:44 / wc
PHYSICAL PROPERTIES							
pH	6.71	s.u.	H	0.01		A4500-H B	01/09/15 13:31 / alp
Solids, Total Dissolved TDS @ 180 C	9150	mg/L		100		A2540 C	01/09/15 12:46 / alp
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.7	01/14/15 14:24 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:24 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 23:24 / clm
Cobalt	0.03	mg/L	D	0.03		E200.7	01/14/15 14:24 / sf
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:24 / clm
Manganese	3.52	mg/L		0.01		E200.7	01/14/15 14:24 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:24 / sf
Nickel	0.10	mg/L		0.05		E200.7	01/14/15 14:24 / sf
Uranium	0.0112	mg/L		0.0003		E200.8	01/14/15 23:24 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:24 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 17:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:29 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.2	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.3	pCi/L	U			E909.0	01/23/15 07:47 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 07:47 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 07:47 / eli-cs
Radium 226	0.34	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.16	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.19	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	1.5	pCi/L				RA-05	01/21/15 11:39 / plj
Radium 228 precision (±)	0.71	pCi/L				RA-05	01/21/15 11:39 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/21/15 11:39 / plj
Thorium 230	0.02	pCi/L	U			E908.0	01/19/15 15:54 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	01/19/15 15:54 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 15:54 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010193-002
Client Sample ID: SBL-1

Report Date: 02/27/15
Collection Date: 01/06/15 10:25
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.99	%				A1030 E	01/16/15 07:35 / kbh
Anions	141	meq/L				A1030 E	01/16/15 07:35 / kbh
Cations	133	meq/L				A1030 E	01/16/15 07:35 / kbh
Solids, Total Dissolved Calculated	8600	mg/L				A1030 E	01/16/15 07:35 / kbh
TDS Balance (0.80 - 1.20)	1.06					A1030 E	01/16/15 07:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 22:02 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 22:02 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 22:02 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 22:02 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 22:02 / jlr
Surr: 1,2-Dichlorobenzene-d4	125	%REC		73.7-126		E624	01/14/15 22:02 / jlr
Surr: Dibromofluoromethane	125	%REC		64.4-131		E624	01/14/15 22:02 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/14/15 22:02 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	01/14/15 22:02 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-002
Client Sample ID: SBL-1

Report Date: 05/19/15
Collection Date: 04/07/15 09:42
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	452	mg/L		5		A2320 B	04/10/15 21:14 / wc
Calcium	483	mg/L		1		E200.7	04/14/15 16:03 / sf
Chloride	111	mg/L	D	5		E300.0	04/15/15 05:44 / wc
Magnesium	1190	mg/L		1		E200.7	04/14/15 16:03 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:11 / lr
Nitrogen, Nitrate+Nitrite as N	39	mg/L	D	2		E353.2	04/14/15 13:40 / lr
Potassium	14	mg/L		1		E200.7	04/14/15 16:03 / sf
Sodium	285	mg/L	D	2		E200.7	04/14/15 16:03 / sf
Sulfate	6010	mg/L	D	20		E300.0	04/15/15 05:44 / wc
PHYSICAL PROPERTIES							
pH	6.85	s.u.	H	0.01		A4500-H B	04/13/15 10:16 / lmc
Solids, Total Dissolved TDS @ 180 C	9380	mg/L		100		A2540 C	04/13/15 10:19 / lmc
METALS - TOTAL							
Aluminum	0.3	mg/L	D	0.2		E200.7	04/15/15 23:36 / sf
Beryllium	ND	mg/L		0.001		E200.8	04/16/15 23:38 / smm
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:38 / smm
Cobalt	0.03	mg/L		0.01		E200.8	04/16/15 23:38 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:38 / smm
Manganese	3.41	mg/L		0.01		E200.7	04/15/15 23:36 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:36 / sf
Nickel	0.12	mg/L		0.05		E200.7	04/15/15 23:36 / sf
Uranium	0.0093	mg/L		0.0003		E200.8	04/16/15 23:38 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:36 / sf
METALS - SPECIATED							
Arsenic-III	0.001	mg/L		0.001		E1632AM	04/28/15 19:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:23 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.1	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U Precision (±)	1.4	pCi/L				E900.1	04/13/15 23:16 / dmf
Gross Alpha minus Rn & U MDC	1.3	pCi/L				E900.1	04/13/15 23:16 / dmf
Lead 210	-0.3	pCi/L	U			E909.0	04/23/15 13:43 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 13:43 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 13:43 / eli-cs
Radium 226	0.71	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.18	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	2.0	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 precision (±)	0.91	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/17/15 11:21 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040353-002
Client Sample ID: SBL-1

Report Date: 05/19/15
Collection Date: 04/07/15 09:42
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	04/17/15 16:12 / cng
Thorium 230 precision (±)	0.5	pCi/L				E908.0	04/17/15 16:12 / cng
Thorium 230 MDC	1.1	pCi/L				E908.0	04/17/15 16:12 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.28	%				A1030 E	04/20/15 07:49 / kbh
Anions	138	meq/L				A1030 E	04/20/15 07:49 / kbh
Cations	135	meq/L				A1030 E	04/20/15 07:49 / kbh
Solids, Total Dissolved Calculated	8500	mg/L				A1030 E	04/20/15 07:49 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/20/15 07:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 18:25 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 18:25 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 18:25 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 18:25 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 18:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/13/15 18:25 / jlr
Surr: Dibromofluoromethane	115	%REC		64.4-131		E624	04/13/15 18:25 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/13/15 18:25 / jlr
Surr: Toluene-d8	104	%REC		79.7-125		E624	04/13/15 18:25 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		SBL-1	SBL-1	SBL-1	SBL-1
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040353-002	C15010193-002	C14100552-001	C14070432-002
Bicarbonate as HCO3	mg/L	452	437	447	467
Calcium	mg/L	483	483	473	502
Chloride	mg/L	111	94	75	73
Magnesium	mg/L	1190	1170	1130	1280
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	39	38	36	36
Potassium	mg/L	14	13	13	15
Sodium	mg/L	285	278	271	309
Sulfate	mg/L	6010	6180	5890	5900
pH	s.u.	6.85	6.71	6.75	6.83
Solids, Total Dissolved TDS @ 180 C	mg/L	9380	9150	9040	9270
Aluminum	mg/L	0.3	0.3	0.6	0.3
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.03	0.03	0.03	0.02
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	3.41	3.52	3.38	3.68
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.12	0.10	0.09	0.08
Uranium	mg/L	0.0093	0.0112	0.0110	0.0104
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.1 *	2.2 *	0.8	0.4
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.4	0.4	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1.3	1.8	0.5	0.6
Lead 210	pCi/L	-0.3	0.3	0.4	0.1
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.71	0.34	0.44	0.41
Radium 226 precision (±)	pCi/L	0.18	0.16	0.21	0.15
Radium 226 MDC	pCi/L	0.16	0.19	0.24	0.16
Radium 228	pCi/L	2.0	1.5	3.7	0.97
Radium 228 precision (±)	pCi/L	0.91	0.71	1.2	0.90
Radium 228 MDC	pCi/L	1.3	1.3	1.8	1.4
Thorium 230	pCi/L	0.2	0.02	0.05	0.04
Thorium 230 precision (±)	pCi/L	0.5	0.05	0.09	0.04
Thorium 230 MDC	pCi/L	1.1	0.1	0.2	0.07
A/C Balance (± 5)	%	-1.28	-2.99	-2.20	3.29
Anions	meq/L	138	141	135	135
Cations	meq/L	135	133	129	144
Solids, Total Dissolved Calculated	mg/L	8500	8600	8200	8500
TDS Balance (0.80 - 1.20)		1.11	1.06	1.10	1.10
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2015

ZONE – 1

515-A

*604

*614

TWQ-142

EPA-2

*EPA-4

*EPA-5

*EPA-7

LEVELS ONLY

TWQ-143

EPA-8

505-A

502-A

501-A

504-A

412

NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-002
Client Sample ID: 515-A

Report Date: 02/27/15
Collection Date: 01/06/15 15:56
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	838	mg/L		5		A2320 B	01/09/15 15:23 / wc
Calcium	461	mg/L		1		E200.7	01/12/15 17:43 / sf
Chloride	431	mg/L	D	5		E300.0	01/09/15 19:53 / wc
Magnesium	1360	mg/L		1		E200.7	01/12/15 17:43 / sf
Nitrogen, Ammonia as N	25.6	mg/L	D	0.5		A4500-NH3 G	01/14/15 13:37 / lr
Nitrogen, Nitrate+Nitrite as N	40	mg/L	D	5		E353.2	01/12/15 12:56 / lr
Potassium	17	mg/L		1		E200.7	01/12/15 17:43 / sf
Sodium	598	mg/L		1		E200.7	01/12/15 17:43 / sf
Sulfate	6560	mg/L	D	20		E300.0	01/09/15 19:53 / wc
PHYSICAL PROPERTIES							
pH	6.07	s.u.	H	0.01		A4500-H B	01/09/15 12:54 / alp
Solids, Total Dissolved TDS @ 180 C	10400	mg/L		100		A2540 C	01/09/15 12:42 / alp
METALS - TOTAL							
Aluminum	0.5	mg/L		0.1		E200.7	01/14/15 13:22 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:22 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:22 / clm
Cobalt	0.02	mg/L		0.01		E200.8	01/14/15 22:22 / clm
Lead	0.001	mg/L		0.001		E200.8	01/14/15 22:22 / clm
Manganese	7.60	mg/L		0.01		E200.7	01/14/15 13:22 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:22 / sf
Nickel	0.09	mg/L		0.05		E200.7	01/14/15 13:22 / sf
Uranium	0.0094	mg/L		0.0003		E200.8	01/14/15 22:22 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:22 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 14:11 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	02/02/15 11:19 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.8	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Lead 210	0.8	pCi/L	U			E909.0	01/22/15 18:51 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 18:51 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 18:51 / eli-cs
Radium 226	2.6	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.60	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.21	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.8	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.95	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.05	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-002
Client Sample ID: 515-A

Report Date: 02/27/15
Collection Date: 01/06/15 15:56
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-0.67	%				A1030 E	01/16/15 07:32 / kbh
Anions	165	meq/L				A1030 E	01/16/15 07:32 / kbh
Cations	163	meq/L				A1030 E	01/16/15 07:32 / kbh
Solids, Total Dissolved Calculated	10000	mg/L				A1030 E	01/16/15 07:32 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/16/15 07:32 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 06:31 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 06:31 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 06:31 / jlr
Chloroform	303	ug/L		5.0		E624	01/14/15 00:40 / jlr
Trihalomethanes, Total	303	ug/L		0.50		E624	01/14/15 06:31 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	01/14/15 06:31 / jlr
Surr: Dibromofluoromethane	123	%REC		64.4-131		E624	01/14/15 06:31 / jlr
Surr: p-Bromofluorobenzene	106	%REC		67.1-133		E624	01/14/15 06:31 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/14/15 06:31 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-002
Client Sample ID: 515-A

Report Date: 05/19/15
Collection Date: 04/07/15 15:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	855	mg/L		5		A2320 B	04/10/15 19:06 / wc
Calcium	453	mg/L		1		E200.7	04/13/15 20:50 / sf
Chloride	383	mg/L	D	5		E300.0	04/13/15 12:03 / wc
Magnesium	1320	mg/L		1		E200.7	04/13/15 20:50 / sf
Nitrogen, Ammonia as N	24	mg/L	D	2		A4500-NH3 G	04/13/15 13:36 / lr
Nitrogen, Nitrate+Nitrite as N	38	mg/L	D	2		E353.2	04/14/15 12:57 / lr
Potassium	17	mg/L		1		E200.7	04/13/15 20:50 / sf
Sodium	594	mg/L	D	2		E200.7	04/13/15 20:50 / sf
Sulfate	6280	mg/L	D	20		E300.0	04/14/15 21:56 / wc
PHYSICAL PROPERTIES							
pH	6.23	s.u.	H	0.01		A4500-H B	04/13/15 09:18 / lmc
Solids, Total Dissolved TDS @ 180 C	10700	mg/L		100		A2540 C	04/13/15 10:11 / lmc
METALS - TOTAL							
Aluminum	0.5	mg/L		0.1		E200.8	04/16/15 16:52 / smm
Beryllium	ND	mg/L		0.001		E200.8	04/16/15 16:52 / smm
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 16:52 / smm
Cobalt	0.02	mg/L		0.01		E200.8	04/16/15 16:52 / smm
Lead	0.002	mg/L		0.001		E200.8	04/16/15 16:52 / smm
Manganese	6.96	mg/L		0.01		E200.7	04/15/15 15:12 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:12 / sf
Nickel	0.12	mg/L		0.05		E200.7	04/15/15 15:12 / sf
Uranium	0.0082	mg/L		0.0003		E200.8	04/16/15 16:52 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:12 / sf
METALS - SPECIATED							
Arsenic-III	0.001	mg/L		0.001		E1632AM	04/24/15 18:02 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	05/07/15 14:49 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	12.2	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	3.2	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	-0.4	pCi/L	U			E909.0	04/24/15 12:49 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/24/15 12:49 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 12:49 / eli-cs
Radium 226	3.2	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.68	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	4.5	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-002
Client Sample ID: 515-A

Report Date: 05/19/15
Collection Date: 04/07/15 15:00
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	04/29/15 17:13 / cng
Thorium 230 precision (±)	0.3	pCi/L				E908.0	04/29/15 17:13 / cng
Thorium 230 MDC	0.6	pCi/L				E908.0	04/29/15 17:13 / cng
- See Case Narrative regarding Th230 analysis.							
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.38	%				A1030 E	04/20/15 07:47 / kbh
Anions	158	meq/L				A1030 E	04/20/15 07:47 / kbh
Cations	159	meq/L				A1030 E	04/20/15 07:47 / kbh
Solids, Total Dissolved Calculated	9600	mg/L				A1030 E	04/20/15 07:47 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/20/15 07:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 09:01 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 09:01 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 09:01 / jlr
Chloroform	186	ug/L		5.0		E624	04/14/15 04:21 / jlr
Trihalomethanes, Total	186	ug/L		0.50		E624	04/14/15 09:01 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/14/15 09:01 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/14/15 09:01 / jlr
Surr: p-Bromofluorobenzene	102	%REC		67.1-133		E624	04/14/15 09:01 / jlr
Surr: Toluene-d8	104	%REC		79.7-125		E624	04/14/15 09:01 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		515-A	515-A	515-A	515-A
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-002	C15010192-002	C14100554-002	C14070433-002
Bicarbonate as HCO3	mg/L	855	838	861	846
Calcium	mg/L	453	461	445	446
Chloride	mg/L	383	431	375	371
Magnesium	mg/L	1320	1360	1310	1310
Nitrogen, Ammonia as N	mg/L	24	25.6	25.3	23
Nitrogen, Nitrate+Nitrite as N	mg/L	38	40	39	41
Potassium	mg/L	17	17	15	19
Sodium	mg/L	594	598	566	623
Sulfate	mg/L	6280	6560	6350	6330
pH	s.u.	6.23	6.07	6.07	6.18
Solids, Total Dissolved TDS @ 180 C	mg/L	10700	10400	10500	10200
Aluminum	mg/L	0.5	0.5	ND(0.1)	0.7
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.02	0.02	0.02	0.02
Lead	mg/L	0.002	0.001	0.001	0.001
Manganese	mg/L	6.96	7.60	7.50	7.82
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.12	0.09	0.10	0.09
Uranium	mg/L	0.0082	0.0094	0.0114	0.0081
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	0.002	0.001	0.002	0.002
Gross Alpha minus Rn & U	pCi/L	12.2 *	3.8 *	2.1	3.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	3.2	1.1	0.5	0.8
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	-0.4	0.8	0.4	0.7
Lead 210 precision (±)	pCi/L	0.7	0.9	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	3.2	2.6	3.7	1.7
Radium 226 precision (±)	pCi/L	0.68	0.60	0.47	0.25
Radium 226 MDC	pCi/L	0.16	0.21	0.24	0.15
Radium 228	pCi/L	4.5	3.8	4.6	4.6
Radium 228 precision (±)	pCi/L	1.1	0.95	1.3	0.99
Radium 228 MDC	pCi/L	1.1	1.2	1.8	1.3
Thorium 230	pCi/L	0.1	0.05	0.02	0.04
Thorium 230 precision (±)	pCi/L	0.3	0.06	0.09	0.05
Thorium 230 MDC	pCi/L	0.6	0.1	0.2	0.1
A/C Balance (± 5)	%	0.38	-0.67	-0.78	0.13
Anions	meq/L	158	165	159	159
Cations	meq/L	159	163	157	160
Solids, Total Dissolved Calculated	mg/L	9600	10000	9600	9700
TDS Balance (0.80 - 1.20)		1.11	1.04	1.09	1.05
Trihalomethanes, Total	ug/L	186	303	247	248

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-003
Client Sample ID: 604

Report Date: 02/27/15
Collection Date: 01/06/15 16:48
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	30	mg/L		5		A2320 B	01/09/15 15:29 / wc
Calcium	449	mg/L		1		E200.7	01/12/15 17:47 / sf
Chloride	72	mg/L	D	5		E300.0	01/12/15 21:13 / wc
Magnesium	826	mg/L		1		E200.7	01/12/15 17:47 / sf
Nitrogen, Ammonia as N	0.11	mg/L		0.05		A4500-NH3 G	01/13/15 15:47 / lr
Nitrogen, Nitrate+Nitrite as N	61	mg/L	D	5		E353.2	01/12/15 13:04 / lr
Potassium	11	mg/L		1		E200.7	01/12/15 17:47 / sf
Sodium	300	mg/L		1		E200.7	01/12/15 17:47 / sf
Sulfate	4620	mg/L	D	20		E300.0	01/12/15 21:13 / wc
PHYSICAL PROPERTIES							
pH	5.45	s.u.	H	0.01		A4500-H B	01/09/15 12:57 / alp
Solids, Total Dissolved TDS @ 180 C	7000	mg/L		100		A2540 C	01/09/15 12:43 / alp
METALS - TOTAL							
Aluminum	0.9	mg/L		0.1		E200.7	01/14/15 13:26 / sf
Beryllium	0.002	mg/L		0.001		E200.7	01/14/15 13:26 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:26 / clm
Cobalt	0.10	mg/L		0.01		E200.8	01/14/15 22:26 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:26 / clm
Manganese	3.81	mg/L		0.01		E200.7	01/14/15 13:26 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:26 / sf
Nickel	0.18	mg/L		0.05		E200.7	01/14/15 13:26 / sf
Uranium	0.0003	mg/L		0.0003		E200.8	01/14/15 22:26 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:26 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 14:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:20 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.2	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Lead 210	0.1	pCi/L	U			E909.0	01/22/15 20:07 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/22/15 20:07 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 20:07 / eli-cs
Radium 226	1.3	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.35	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.7	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.93	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.05	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-003
Client Sample ID: 604

Report Date: 02/27/15
Collection Date: 01/06/15 16:48
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-3.08	%				A1030 E	02/24/15 16:37 / sdw
Anions	110	meq/L				A1030 E	02/24/15 16:37 / sdw
Cations	104	meq/L				A1030 E	02/24/15 16:37 / sdw
Solids, Total Dissolved Calculated	7000	mg/L				A1030 E	02/24/15 16:37 / sdw
TDS Balance (0.80 - 1.20)	0.99					A1030 E	02/24/15 16:37 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 01:15 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 01:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 01:15 / jlr
Chloroform	9.24	ug/L		0.50		E624	01/14/15 01:15 / jlr
Trihalomethanes, Total	9.24	ug/L		0.50		E624	01/14/15 01:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/14/15 01:15 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	01/14/15 01:15 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	01/14/15 01:15 / jlr
Surr: Toluene-d8	105	%REC		79.7-125		E624	01/14/15 01:15 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-003
Client Sample ID: 604

Report Date: 05/19/15
Collection Date: 04/07/15 15:52
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	30	mg/L		5		A2320 B	04/10/15 19:13 / wc
Calcium	452	mg/L		1		E200.7	04/13/15 20:54 / sf
Chloride	75	mg/L	D	2		E300.0	04/13/15 12:21 / wc
Magnesium	820	mg/L		1		E200.7	04/13/15 20:54 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:43 / lr
Nitrogen, Nitrate+Nitrite as N	64	mg/L	D	5		E353.2	04/14/15 13:05 / lr
Potassium	11	mg/L		1		E200.7	04/13/15 20:54 / sf
Sodium	305	mg/L		1		E200.7	04/13/15 20:54 / sf
Sulfate	4530	mg/L	D	8		E300.0	04/23/15 14:10 / wc
PHYSICAL PROPERTIES							
pH	5.53	s.u.	H	0.01		A4500-H B	04/13/15 09:21 / lmc
Solids, Total Dissolved TDS @ 180 C	7230	mg/L		100		A2540 C	04/13/15 10:11 / lmc
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.7	04/15/15 15:16 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:16 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 16:55 / smm
Cobalt	0.10	mg/L		0.01		E200.8	04/16/15 16:55 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 16:55 / smm
Manganese	3.61	mg/L		0.01		E200.7	04/15/15 15:16 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:16 / sf
Nickel	0.19	mg/L		0.05		E200.7	04/15/15 15:16 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/16/15 16:55 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:16 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 18:14 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 14:54 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	10.4	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	2.9	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	-0.6	pCi/L	U			E909.0	04/24/15 14:32 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/24/15 14:32 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 14:32 / eli-cs
Radium 226	1.7	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.41	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	5.4	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-003
Client Sample ID: 604

Report Date: 05/19/15
Collection Date: 04/07/15 15:52
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.95	%				A1030 E	04/27/15 09:39 / kbh
Anions	102	meq/L				A1030 E	04/27/15 09:39 / kbh
Cations	104	meq/L				A1030 E	04/27/15 09:39 / kbh
Solids, Total Dissolved Calculated	6500	mg/L				A1030 E	04/27/15 09:39 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/27/15 09:39 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 04:56 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 04:56 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 04:56 / jlr
Chloroform	8.24	ug/L		0.50		E624	04/14/15 04:56 / jlr
Trihalomethanes, Total	8.24	ug/L		0.50		E624	04/14/15 04:56 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/14/15 04:56 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	04/14/15 04:56 / jlr
Surr: p-Bromofluorobenzene	95.0	%REC		67.1-133		E624	04/14/15 04:56 / jlr
Surr: Toluene-d8	110	%REC		79.7-125		E624	04/14/15 04:56 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		604	604	604	604
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-003	C15010192-003	C14100554-003	C14070433-003
Bicarbonate as HCO3	mg/L	30	30	28	28
Calcium	mg/L	452	449	435	458
Chloride	mg/L	75	72	68	59
Magnesium	mg/L	820	826	798	866
Nitrogen, Ammonia as N	mg/L	ND(0.05)	0.11	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	64	61	56	64
Potassium	mg/L	11	11	10	12
Sodium	mg/L	305	300	287	332
Sulfate	mg/L	4530	4620	4710	4650
pH	s.u.	5.53	5.45	5.54	5.45
Solids, Total Dissolved TDS @ 180 C	mg/L	7230	7000	7060	7000
Aluminum	mg/L	0.3	0.9	0.9	0.9
Beryllium	mg/L	ND(0.001)	0.002	0.001	0.001
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.10	0.10	0.10	0.09
Lead	mg/L	ND(0.001)	ND(0.001)	0.001	ND(0.001)
Manganese	mg/L	3.61	3.81	3.74	3.83
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.19	0.18	0.19	0.18
Uranium	mg/L	ND(0.0003)	0.0003	0.0004	0.0005
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	10.4 *	3.2 *	1.6	1.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.9	1	0.4	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	-0.6	0.1	0.3	0.3
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.7	1.3	2.1	1.1
Radium 226 precision (±)	pCi/L	0.41	0.35	0.35	0.20
Radium 226 MDC	pCi/L	0.16	0.18	0.22	0.15
Radium 228	pCi/L	5.4	3.7	5.4	3.9
Radium 228 precision (±)	pCi/L	1.3	0.93	1.2	1.1
Radium 228 MDC	pCi/L	1.2	1.1	1.6	1.5
Thorium 230	pCi/L	0.04	0.05	0.02	0.009
Thorium 230 precision (±)	pCi/L	0.09	0.06	0.08	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
A/C Balance (± 5)	%	0.95	-3.08	-2.37	2.62
Anions	meq/L	102	110	105	103
Cations	meq/L	104	104	100	109
Solids, Total Dissolved Calculated	mg/L	6500	7000	6600	6700
TDS Balance (0.80 - 1.20)		1.11	0.99	1.06	1.05
Trihalomethanes, Total	ug/L	8.24	9.24	6.64	10.8

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-001
Client Sample ID: 614

Report Date: 02/27/15
Collection Date: 01/06/15 14:48
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1220	mg/L		5		A2320 B	01/09/15 15:16 / wc
Calcium	544	mg/L		1		E200.7	01/12/15 17:40 / sf
Chloride	316	mg/L	D	5		E300.0	01/09/15 19:38 / wc
Magnesium	720	mg/L		1		E200.7	01/12/15 17:40 / sf
Nitrogen, Ammonia as N	102	mg/L	D	1		A4500-NH3 G	01/14/15 14:27 / lr
Nitrogen, Nitrate+Nitrite as N	182	mg/L	D	10		E353.2	01/12/15 12:54 / lr
Potassium	15	mg/L		1		E200.7	01/12/15 17:40 / sf
Sodium	462	mg/L		1		E200.7	01/12/15 17:40 / sf
Sulfate	3900	mg/L	D	20		E300.0	01/09/15 19:38 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	01/09/15 12:51 / alp
Solids, Total Dissolved TDS @ 180 C	7080	mg/L		100		A2540 C	01/09/15 12:42 / alp
METALS - TOTAL							
Aluminum	0.6	mg/L		0.1		E200.8	01/14/15 22:05 / clm
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:18 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:05 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 22:05 / clm
Lead	0.005	mg/L		0.001		E200.8	01/14/15 22:05 / clm
Manganese	0.64	mg/L		0.01		E200.7	01/14/15 13:18 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:18 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 13:18 / sf
Uranium	0.0460	mg/L		0.0003		E200.8	01/14/15 22:05 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:18 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 13:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:17 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.2	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Lead 210	0.03	pCi/L	U			E909.0	01/22/15 15:17 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/22/15 15:17 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 15:17 / eli-cs
Radium 226	0.92	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.21	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.5	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.90	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.02	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-001
Client Sample ID: 614

Report Date: 02/27/15
Collection Date: 01/06/15 14:48
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.90	%				A1030 E	01/16/15 07:31 / kbh
Anions	121	meq/L				A1030 E	01/16/15 07:31 / kbh
Cations	114	meq/L				A1030 E	01/16/15 07:31 / kbh
Solids, Total Dissolved Calculated	7200	mg/L				A1030 E	01/16/15 07:31 / kbh
TDS Balance (0.80 - 1.20)	0.98					A1030 E	01/16/15 07:31 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 00:05 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 00:05 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 00:05 / jlr
Chloroform	109	ug/L		5.0		E624	01/14/15 19:42 / jlr
Trihalomethanes, Total	109	ug/L		0.50		E624	01/14/15 00:05 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	01/14/15 00:05 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/14/15 00:05 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/14/15 00:05 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	01/14/15 00:05 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-001
Client Sample ID: 614

Report Date: 05/19/15
Collection Date: 04/07/15 13:55
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	1240	mg/L		5		A2320 B	04/10/15 18:57 / wc
Calcium	547	mg/L		1		E200.7	04/13/15 20:34 / sf
Chloride	286	mg/L	D	5		E300.0	04/13/15 11:46 / wc
Magnesium	707	mg/L		1		E200.7	04/13/15 20:34 / sf
Nitrogen, Ammonia as N	96	mg/L	D	2		A4500-NH3 G	04/13/15 13:35 / lr
Nitrogen, Nitrate+Nitrite as N	186	mg/L	D	20		E353.2	04/14/15 12:47 / lr
Potassium	15	mg/L		1		E200.7	04/13/15 20:34 / sf
Sodium	466	mg/L	D	2		E200.7	04/13/15 20:34 / sf
Sulfate	3740	mg/L	D	20		E300.0	04/14/15 21:38 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	04/13/15 09:15 / lmc
Solids, Total Dissolved TDS @ 180 C	7220	mg/L		100		A2540 C	04/13/15 10:10 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	04/16/15 16:48 / smm
Beryllium	ND	mg/L		0.001		E200.8	04/16/15 16:48 / smm
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 16:48 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 16:48 / smm
Lead	0.002	mg/L		0.001		E200.8	04/16/15 16:48 / smm
Manganese	0.52	mg/L		0.01		E200.7	04/15/15 14:56 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 14:56 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 14:56 / sf
Uranium	0.0405	mg/L		0.0003		E200.8	04/16/15 16:48 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 14:56 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 17:50 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 14:48 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	9.2	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	2.6	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	0.3	pCi/L	U			E909.0	04/24/15 08:31 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/24/15 08:31 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 08:31 / eli-cs
Radium 226	1.4	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.35	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.17	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	4.0	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	1.0	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-001
Client Sample ID: 614

Report Date: 05/19/15
Collection Date: 04/07/15 13:55
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.007	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.1	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.3	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.89	%				A1030 E	04/20/15 07:47 / kbh
Anions	117	meq/L				A1030 E	04/20/15 07:47 / kbh
Cations	113	meq/L				A1030 E	04/20/15 07:47 / kbh
Solids, Total Dissolved Calculated	7100	mg/L				A1030 E	04/20/15 07:47 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/20/15 07:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 23:42 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 23:42 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 23:42 / jlr
Chloroform	103	ug/L		5.0		E624	04/13/15 23:07 / jlr
Trihalomethanes, Total	103	ug/L		0.50		E624	04/13/15 23:42 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/13/15 23:42 / jlr
Surr: Dibromofluoromethane	115	%REC		64.4-131		E624	04/13/15 23:42 / jlr
Surr: p-Bromofluorobenzene	96.0	%REC		67.1-133		E624	04/13/15 23:42 / jlr
Surr: Toluene-d8	108	%REC		79.7-125		E624	04/13/15 23:42 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		614	614	614	614
Collection Date:		4/7/2015	1/6/2015	10/7/2014	7/8/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-001	C15010192-001	C14100554-001	C14070433-001
Bicarbonate as HCO3	mg/L	1240	1220	1250	1250
Calcium	mg/L	547	544	536	527
Chloride	mg/L	286	316	263	268
Magnesium	mg/L	707	720	706	734
Nitrogen, Ammonia as N	mg/L	96	102	100	143
Nitrogen, Nitrate+Nitrite as N	mg/L	186	182	169	138
Potassium	mg/L	15	15	14	16
Sodium	mg/L	466	462	436	495
Sulfate	mg/L	3740	3900	3690	3860
pH	s.u.	6.57	6.61	6.63	6.57
Solids, Total Dissolved TDS @ 180 C	mg/L	7220	7080	7200	7180
Aluminum	mg/L	ND(0.1)	0.6	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.002	0.005	0.004	0.002
Manganese	mg/L	0.52	0.64	0.71	0.56
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0405	0.0460	0.0464	0.0412
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	9.2 *	2.2 *	0.8	2.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.6	0.8	0.3	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	0.3	0.03	0.4	0.5
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.4	0.92	0.94	0.59
Radium 226 precision (±)	pCi/L	0.35	0.21	0.23	0.15
Radium 226 MDC	pCi/L	0.17	0.18	0.19	0.14
Radium 228	pCi/L	4.0	3.5	4.1	5.0
Radium 228 precision (±)	pCi/L	1.0	0.90	1.0	0.94
Radium 228 MDC	pCi/L	1.2	1.0	1.4	1.2
Thorium 230	pCi/L	-0.007	0.02	0.04	0.02
Thorium 230 precision (±)	pCi/L	0.1	0.09	0.2	0.09
Thorium 230 MDC	pCi/L	0.3	0.2	0.3	0.2
A/C Balance (± 5)	%	-1.89	-2.90	-1.71	0.24
Anions	meq/L	117	121	115	118
Cations	meq/L	113	114	111	119
Solids, Total Dissolved Calculated	mg/L	7100	7200	6900	7200
TDS Balance (0.80 - 1.20)		1.02	0.98	1.04	1.00
Trihalomethanes, Total	ug/L	103	109	80.0	124

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-009
Client Sample ID: TWQ-142

Report Date: 02/27/15
Collection Date: 01/07/15 14:10
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	313	mg/L		5		A2320 B	01/09/15 16:20 / wc
Calcium	66	mg/L		1		E200.7	01/12/15 18:28 / sf
Chloride	20	mg/L		1		E300.0	01/09/15 22:43 / wc
Magnesium	34	mg/L		1		E200.7	01/12/15 18:28 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:54 / lr
Nitrogen, Nitrate+Nitrite as N	0.5	mg/L		0.1		E353.2	01/12/15 13:24 / lr
Potassium	4	mg/L		1		E200.7	01/12/15 18:28 / sf
Sodium	320	mg/L		1		E200.7	01/12/15 18:28 / sf
Sulfate	736	mg/L	D	2		E300.0	01/09/15 22:43 / wc
PHYSICAL PROPERTIES							
pH	7.33	s.u.	H	0.01		A4500-H B	01/09/15 13:19 / alp
Solids, Total Dissolved TDS @ 180 C	1340	mg/L		20		A2540 C	01/09/15 12:45 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:01 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:01 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/14/15 14:01 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/14/15 14:01 / sf
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:47 / clm
Manganese	0.03	mg/L		0.01		E200.7	01/14/15 14:01 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:01 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:01 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/14/15 22:47 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:01 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 15:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:36 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.5	pCi/L	U			E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	0.5	pCi/L	U			E909.0	01/23/15 03:10 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 03:10 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 03:10 / eli-cs
Radium 226	0.65	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	1.1	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.70	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.94	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.1	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-009
Client Sample ID: TWQ-142

Report Date: 02/27/15
Collection Date: 01/07/15 14:10
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.24	%				A1030 E	01/16/15 07:34 / kbh
Anions	21.1	meq/L				A1030 E	01/16/15 07:34 / kbh
Cations	20.2	meq/L				A1030 E	01/16/15 07:34 / kbh
Solids, Total Dissolved Calculated	1400	mg/L				A1030 E	01/16/15 07:34 / kbh
TDS Balance (0.80 - 1.20)	0.99					A1030 E	01/16/15 07:34 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 04:45 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 04:45 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 04:45 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 04:45 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 04:45 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/14/15 04:45 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	01/14/15 04:45 / jlr
Surr: p-Bromofluorobenzene	107	%REC		67.1-133		E624	01/14/15 04:45 / jlr
Surr: Toluene-d8	104	%REC		79.7-125		E624	01/14/15 04:45 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-009
Client Sample ID: TWQ-142

Report Date: 05/19/15
Collection Date: 04/08/15 13:40
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	329	mg/L		5		A2320 B	04/10/15 20:40 / wc
Calcium	68	mg/L		1		E200.7	04/13/15 21:18 / sf
Chloride	17	mg/L		1		E300.0	04/13/15 14:40 / wc
Magnesium	34	mg/L		1		E200.7	04/13/15 21:18 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:05 / lr
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	04/14/15 13:20 / lr
Potassium	4	mg/L		1		E200.7	04/13/15 21:18 / sf
Sodium	318	mg/L		1		E200.7	04/13/15 21:18 / sf
Sulfate	714	mg/L	D	2		E300.0	04/15/15 01:19 / wc
PHYSICAL PROPERTIES							
pH	7.51	s.u.	H	0.01		A4500-H B	04/13/15 09:40 / lmc
Solids, Total Dissolved TDS @ 180 C	1360	mg/L		20		A2540 C	04/13/15 10:13 / lmc
METALS - TOTAL							
Aluminum	0.4	mg/L		0.1		E200.8	04/16/15 17:31 / smm
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:47 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/15/15 15:47 / sf
Cobalt	ND	mg/L		0.01		E200.7	04/15/15 15:47 / sf
Lead	0.002	mg/L		0.001		E200.8	04/16/15 17:31 / smm
Manganese	0.12	mg/L		0.01		E200.7	04/15/15 15:47 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:47 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 15:47 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/16/15 17:31 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:47 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 19:50 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:09 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.0	pCi/L				E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.8	pCi/L				E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:16 / trs
Lead 210	0.07	pCi/L	U			E909.0	04/25/15 00:49 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/25/15 00:49 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/25/15 00:49 / eli-cs
Radium 226	0.79	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.18	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	1.7	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.80	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-009
Client Sample ID: TWQ-142

Report Date: 05/19/15
Collection Date: 04/08/15 13:40
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.55	%				A1030 E	04/20/15 07:48 / kbh
Anions	20.8	meq/L				A1030 E	04/20/15 07:48 / kbh
Cations	20.2	meq/L				A1030 E	04/20/15 07:48 / kbh
Solids, Total Dissolved Calculated	1300	mg/L				A1030 E	04/20/15 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.02					A1030 E	04/20/15 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/13/15 16:05 / jlr
Bromoform	ND	ug/L		0.50		E624	04/13/15 16:05 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/13/15 16:05 / jlr
Chloroform	ND	ug/L		0.50		E624	04/13/15 16:05 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/13/15 16:05 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	04/13/15 16:05 / jlr
Surr: Dibromofluoromethane	94.0	%REC		64.4-131		E624	04/13/15 16:05 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	04/13/15 16:05 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	04/13/15 16:05 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		TWQ-142	TWQ-142	TWQ-142	TWQ-142
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-009	C15010192-009	C14100554-009	C14070433-009
Bicarbonate as HCO3	mg/L	329	313	322	307
Calcium	mg/L	68	66	65	59
Chloride	mg/L	17	20	16	17
Magnesium	mg/L	34	34	33	34
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	0.4	0.5	0.5	0.5
Potassium	mg/L	4	4	4	4
Sodium	mg/L	318	320	319	370
Sulfate	mg/L	714	736	707	741
pH	s.u.	7.51	7.33	7.40	7.42
Solids, Total Dissolved TDS @ 180 C	mg/L	1360	1340	1340	1330
Aluminum	mg/L	0.4	ND(0.1)	ND(0.1)	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	0.002	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.12	0.03	0.02	0.03
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	ND(0.0003)	ND(0.0003)	0.0006	ND(0.0003)
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	5.0 *	0.5 *	1.2	0.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.8	0.4	0.4	0.5
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	0.07	0.5	0.2	-0.07
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	0.79	0.65	1.0	0.68
Radium 226 precision (±)	pCi/L	0.18	0.17	0.23	0.16
Radium 226 MDC	pCi/L	0.15	0.16	0.18	0.15
Radium 228	pCi/L	1.7	1.1	0.79	0.1
Radium 228 precision (±)	pCi/L	0.80	0.70	1.0	0.89
Radium 228 MDC	pCi/L	1.0	0.94	1.6	1.5
Thorium 230	pCi/L	0.04	0.1	0.04	0.03
Thorium 230 precision (±)	pCi/L	0.09	0.09	0.09	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
A/C Balance (± 5)	%	-1.55	-2.24	-1.54	2.26
Anions	meq/L	20.8	21.1	20.5	21.0
Cations	meq/L	20.2	20.2	19.9	22.0
Solids, Total Dissolved Calculated	mg/L	1300	1400	1300	1400
TDS Balance (0.80 - 1.20)		1.02	0.99	1.02	0.95
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-007
Client Sample ID: EPA-2

Report Date: 02/27/15
Collection Date: 01/07/15 12:15
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	293	mg/L		5		A2320 B	01/09/15 15:58 / wc
Calcium	399	mg/L		1		E200.7	01/12/15 18:02 / sf
Chloride	27	mg/L		1		E300.0	01/09/15 22:12 / wc
Magnesium	188	mg/L		1		E200.7	01/12/15 18:02 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:42 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/12/15 13:19 / lr
Potassium	7	mg/L		1		E200.7	01/12/15 18:02 / sf
Sodium	206	mg/L		1		E200.7	01/12/15 18:02 / sf
Sulfate	1950	mg/L	D	4		E300.0	01/09/15 22:12 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	01/09/15 13:13 / alp
Solids, Total Dissolved TDS @ 180 C	3080	mg/L		20		A2540 C	01/09/15 12:44 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 13:41 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:41 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/14/15 13:41 / sf
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 22:40 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:40 / clm
Manganese	1.54	mg/L		0.01		E200.7	01/14/15 13:41 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:41 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 13:41 / sf
Uranium	0.0014	mg/L		0.0003		E200.8	01/14/15 22:40 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:41 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 15:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:33 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.5	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	0.4	pCi/L	U			E909.0	01/23/15 00:51 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 00:51 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 00:51 / eli-cs
Radium 226	1.4	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.36	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.2	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.91	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.92	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.3	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-007
Client Sample ID: EPA-2

Report Date: 02/27/15
Collection Date: 01/07/15 12:15
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-1.88	%				A1030 E	01/16/15 07:33 / kbh
Anions	46.2	meq/L				A1030 E	01/16/15 07:33 / kbh
Cations	44.5	meq/L				A1030 E	01/16/15 07:33 / kbh
Solids, Total Dissolved Calculated	3000	mg/L				A1030 E	01/16/15 07:33 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/16/15 07:33 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 03:35 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 03:35 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 03:35 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 03:35 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 03:35 / jlr
Surr: 1,2-Dichlorobenzene-d4	102	%REC		73.7-126		E624	01/14/15 03:35 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/14/15 03:35 / jlr
Surr: p-Bromofluorobenzene	105	%REC		67.1-133		E624	01/14/15 03:35 / jlr
Surr: Toluene-d8	105	%REC		79.7-125		E624	01/14/15 03:35 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-007
Client Sample ID: EPA-2

Report Date: 05/19/15
Collection Date: 04/08/15 12:05
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	292	mg/L		5		A2320 B	04/10/15 20:24 / wc
Calcium	395	mg/L		1		E200.7	04/13/15 21:10 / sf
Chloride	23	mg/L		1		E300.0	04/13/15 13:31 / wc
Magnesium	180	mg/L		1		E200.7	04/13/15 21:10 / sf
Nitrogen, Ammonia as N	0.34	mg/L		0.05		A4500-NH3 G	04/13/15 13:02 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/14/15 13:15 / lr
Potassium	7	mg/L		1		E200.7	04/13/15 21:10 / sf
Sodium	207	mg/L		1		E200.7	04/13/15 21:10 / sf
Sulfate	1860	mg/L	D	4		E300.0	04/15/15 00:42 / wc
PHYSICAL PROPERTIES							
pH	7.06	s.u.	H	0.01		A4500-H B	04/13/15 09:34 / lmc
Solids, Total Dissolved TDS @ 180 C	3100	mg/L		20		A2540 C	04/13/15 10:12 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 15:39 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:39 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 17:25 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 17:25 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:25 / smm
Manganese	1.50	mg/L		0.01		E200.7	04/15/15 15:39 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:39 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 15:39 / sf
Uranium	0.0016	mg/L		0.0003		E200.8	04/16/15 17:25 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:39 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 19:26 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:03 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.9	pCi/L				E900.1	04/29/15 21:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	04/29/15 21:16 / trs
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	04/29/15 21:16 / trs
Lead 210	0.3	pCi/L	U			E909.0	04/24/15 21:23 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/24/15 21:23 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 21:23 / eli-cs
Radium 226	1.4	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.35	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	3.6	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	1.1	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-007
Client Sample ID: EPA-2

Report Date: 05/19/15
Collection Date: 04/08/15 12:05
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.02	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
DATA QUALITY							
A/C Balance (± 5)	-0.37	%				A1030 E	04/20/15 07:48 / kbh
Anions	44.1	meq/L				A1030 E	04/20/15 07:48 / kbh
Cations	43.8	meq/L				A1030 E	04/20/15 07:48 / kbh
Solids, Total Dissolved Calculated	2800	mg/L				A1030 E	04/20/15 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	04/20/15 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 07:16 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 07:16 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 07:16 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 07:16 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 07:16 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/14/15 07:16 / jlr
Surr: Dibromofluoromethane	115	%REC		64.4-131		E624	04/14/15 07:16 / jlr
Surr: p-Bromofluorobenzene	106	%REC		67.1-133		E624	04/14/15 07:16 / jlr
Surr: Toluene-d8	110	%REC		79.7-125		E624	04/14/15 07:16 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-007	C15010192-007	C14100554-007	C14070433-007
Bicarbonate as HCO3	mg/L	292	293	298	304
Calcium	mg/L	395	399	394	370
Chloride	mg/L	23	27	21	22
Magnesium	mg/L	180	188	180	176
Nitrogen, Ammonia as N	mg/L	0.34	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	7
Sodium	mg/L	207	206	221	214
Sulfate	mg/L	1860	1950	1820	1860
pH	s.u.	7.06	6.87	7.02	6.88
Solids, Total Dissolved TDS @ 180 C	mg/L	3100	3080	3070	2990
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.50	1.54	1.55	1.37
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0016	0.0014	0.0022	0.0014
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.9 *	1.7 *	1.7	1.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.6	0.7	0.4	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.8	0.5	0.4	0.6
Lead 210	pCi/L	0.3	0.4	0.1	0.1
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.4	1.4	1.4	1.1
Radium 226 precision (±)	pCi/L	0.35	0.36	0.26	0.20
Radium 226 MDC	pCi/L	0.16	0.16	0.19	0.14
Radium 228	pCi/L	3.6	3.2	3.5	2.5
Radium 228 precision (±)	pCi/L	1.1	0.91	1.2	0.97
Radium 228 MDC	pCi/L	1.1	0.92	1.7	1.4
Thorium 230	pCi/L	-0.02	0.3	0.008	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.1	0.1	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
A/C Balance (± 5)	%	-0.37	-1.88	0.99	-2.22
Anions	meq/L	44.1	46.2	43.4	44.4
Cations	meq/L	43.8	44.5	44.3	42.5
Solids, Total Dissolved Calculated	mg/L	2800	3000	2800	2800
TDS Balance (0.80 - 1.20)		1.09	1.04	1.09	1.05
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-004
Client Sample ID: EPA-4

Report Date: 02/27/15
Collection Date: 01/07/15 09:35
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	159	mg/L		5		A2320 B	01/09/15 15:36 / wc
Calcium	490	mg/L		1		E200.7	01/12/15 17:51 / sf
Chloride	43	mg/L	D	2		E300.0	01/09/15 20:24 / wc
Magnesium	381	mg/L		1		E200.7	01/12/15 17:51 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/13/15 15:49 / lr
Nitrogen, Nitrate+Nitrite as N	0.6	mg/L		0.1		E353.2	01/12/15 13:11 / lr
Potassium	9	mg/L		1		E200.7	01/12/15 17:51 / sf
Sodium	180	mg/L		1		E200.7	01/12/15 17:51 / sf
Sulfate	3060	mg/L	D	8		E300.0	01/09/15 20:24 / wc
PHYSICAL PROPERTIES							
pH	6.87	s.u.	H	0.01		A4500-H B	01/09/15 13:00 / alp
Solids, Total Dissolved TDS @ 180 C	4410	mg/L		40		A2540 C	01/09/15 12:43 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 13:30 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:30 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:29 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 22:29 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:29 / clm
Manganese	3.28	mg/L		0.01		E200.7	01/14/15 13:30 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:30 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 13:30 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/14/15 22:29 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:30 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 14:37 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:22 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Lead 210	-0.1	pCi/L	U			E909.0	01/22/15 21:23 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/22/15 21:23 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 21:23 / eli-cs
Radium 226	1.2	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.30	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.9	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	1.0	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.91	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.03	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-004
Client Sample ID: EPA-4

Report Date: 02/27/15
Collection Date: 01/07/15 09:35
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.80	%				A1030 E	01/16/15 07:32 / kbh
Anions	67.6	meq/L				A1030 E	01/16/15 07:32 / kbh
Cations	63.9	meq/L				A1030 E	01/16/15 07:32 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	01/16/15 07:32 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/16/15 07:32 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 01:50 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 01:50 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 01:50 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 01:50 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 01:50 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	01/14/15 01:50 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	01/14/15 01:50 / jlr
Surr: p-Bromofluorobenzene	110	%REC		67.1-133		E624	01/14/15 01:50 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	01/14/15 01:50 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-006
Client Sample ID: EPA-4

Report Date: 05/19/15
Collection Date: 04/08/15 10:58
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	157	mg/L		5		A2320 B	04/10/15 20:16 / wc
Calcium	487	mg/L		1		E200.7	04/13/15 21:06 / sf
Chloride	37	mg/L	D	2		E300.0	04/13/15 13:13 / wc
Magnesium	384	mg/L		1		E200.7	04/13/15 21:06 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:00 / lr
Nitrogen, Nitrate+Nitrite as N	0.5	mg/L		0.1		E353.2	04/14/15 13:12 / lr
Potassium	8	mg/L		1		E200.7	04/13/15 21:06 / sf
Sodium	184	mg/L		1		E200.7	04/13/15 21:06 / sf
Sulfate	2940	mg/L	D	8		E300.0	04/15/15 00:24 / wc
PHYSICAL PROPERTIES							
pH	6.94	s.u.	H	0.01		A4500-H B	04/13/15 09:30 / lmc
Solids, Total Dissolved TDS @ 180 C	4590	mg/L		40		A2540 C	04/13/15 10:12 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 15:28 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:28 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 17:13 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 17:13 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:13 / smm
Manganese	2.82	mg/L		0.01		E200.7	04/15/15 15:28 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:28 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 15:28 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/16/15 17:13 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:28 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 19:14 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:02 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.0	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	1.9	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	-0.1	pCi/L	U			E909.0	04/24/15 19:40 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/24/15 19:40 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 19:40 / eli-cs
Radium 226	1.7	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.40	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	3.0	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.97	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-006
Client Sample ID: EPA-4

Report Date: 05/19/15
Collection Date: 04/08/15 10:58
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.52	%				A1030 E	04/20/15 07:48 / kbh
Anions	64.8	meq/L				A1030 E	04/20/15 07:48 / kbh
Cations	64.2	meq/L				A1030 E	04/20/15 07:48 / kbh
Solids, Total Dissolved Calculated	4100	mg/L				A1030 E	04/20/15 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	04/20/15 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 06:41 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 06:41 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 06:41 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 06:41 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 06:41 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/14/15 06:41 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	04/14/15 06:41 / jlr
Surr: p-Bromofluorobenzene	99.0	%REC		67.1-133		E624	04/14/15 06:41 / jlr
Surr: Toluene-d8	109	%REC		79.7-125		E624	04/14/15 06:41 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-4	EPA-4	EPA-4	EPA-4
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-006	C15010192-004	C14100554-006	C14070433-006
Bicarbonate as HCO3	mg/L	157	159	149	135
Calcium	mg/L	487	490	477	527
Chloride	mg/L	37	43	34	34
Magnesium	mg/L	384	381	374	402
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	0.5	0.6	0.6	0.5
Potassium	mg/L	8	9	8	9
Sodium	mg/L	184	180	175	191
Sulfate	mg/L	2940	3060	2910	2950
pH	s.u.	6.94	6.87	7.02	7.43
Solids, Total Dissolved TDS @ 180 C	mg/L	4590	4410	4520	4330
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	2.82	3.28	2.41	2.76
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	ND(0.0003)	ND(0.0003)	0.0005	ND(0.0003)
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	6.0 *	1.5 *	2.3	1.6
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.9	0.6	0.5	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	-0.1	-0.1	0.3	0.7
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.7	1.2	1.8	1.0
Radium 226 precision (±)	pCi/L	0.40	0.30	0.29	0.19
Radium 226 MDC	pCi/L	0.15	0.16	0.18	0.14
Radium 228	pCi/L	3.0	3.9	3.4	2.1
Radium 228 precision (±)	pCi/L	0.97	1.0	1.1	0.95
Radium 228 MDC	pCi/L	1.1	0.91	1.6	1.4
Thorium 230	pCi/L	-0.01	0.03	-0.02	0.05
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.05	0.07
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.1
A/C Balance (± 5)	%	-0.52	-2.80	-1.32	2.51
Anions	meq/L	64.8	67.6	64.1	64.6
Cations	meq/L	64.2	63.9	62.4	67.9
Solids, Total Dissolved Calculated	mg/L	4100	4300	4100	4200
TDS Balance (0.80 - 1.20)		1.11	1.03	1.11	1.03
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-005
Client Sample ID: EPA-5

Report Date: 02/27/15
Collection Date: 01/07/15 10:32
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	53	mg/L		5		A2320 B	01/09/15 15:43 / wc
Calcium	461	mg/L		1		E200.7	01/12/15 17:55 / sf
Chloride	44	mg/L	D	2		E300.0	01/09/15 20:39 / wc
Magnesium	475	mg/L		1		E200.7	01/12/15 17:55 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:39 / lr
Nitrogen, Nitrate+Nitrite as N	3.6	mg/L	D	0.5		E353.2	01/12/15 13:14 / lr
Potassium	7	mg/L		1		E200.7	01/12/15 17:55 / sf
Sodium	106	mg/L		1		E200.7	01/12/15 17:55 / sf
Sulfate	3240	mg/L	D	8		E300.0	01/09/15 20:39 / wc
PHYSICAL PROPERTIES							
pH	5.86	s.u.	H	0.01		A4500-H B	01/09/15 13:03 / alp
Solids, Total Dissolved TDS @ 180 C	4600	mg/L		30		A2540 C	01/09/15 12:43 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 13:34 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:34 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:33 / clm
Cobalt	0.10	mg/L		0.01		E200.8	01/14/15 22:33 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:33 / clm
Manganese	0.74	mg/L		0.01		E200.7	01/14/15 13:34 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:34 / sf
Nickel	0.09	mg/L		0.05		E200.7	01/14/15 13:34 / sf
Uranium	0.0003	mg/L		0.0003		E200.8	01/14/15 22:33 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:34 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 14:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:27 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.8	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U Precision (±)	0.7	pCi/L				E900.1	01/19/15 13:12 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 13:12 / dmf
Lead 210	0.2	pCi/L	U			E909.0	01/22/15 22:32 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/22/15 22:32 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 22:32 / eli-cs
Radium 226	1.2	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.31	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	1.7	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.65	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.93	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.07	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-005
Client Sample ID: EPA-5

Report Date: 02/27/15
Collection Date: 01/07/15 10:32
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.12	%				A1030 E	01/16/15 07:33 / kbh
Anions	69.7	meq/L				A1030 E	01/16/15 07:33 / kbh
Cations	66.8	meq/L				A1030 E	01/16/15 07:33 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	01/16/15 07:33 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/16/15 07:33 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 02:25 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 02:25 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 02:25 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 02:25 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 02:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/14/15 02:25 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/14/15 02:25 / jlr
Surr: p-Bromofluorobenzene	106	%REC		67.1-133		E624	01/14/15 02:25 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	01/14/15 02:25 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-005
Client Sample ID: EPA-5

Report Date: 05/19/15
Collection Date: 04/08/15 10:05
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	51	mg/L		5		A2320 B	04/10/15 20:01 / wc
Calcium	466	mg/L		1		E200.7	04/13/15 21:02 / sf
Chloride	39	mg/L	D	2		E300.0	04/13/15 12:56 / wc
Magnesium	475	mg/L		1		E200.7	04/13/15 21:02 / sf
Nitrogen, Ammonia as N	1.12	mg/L		0.05		A4500-NH3 G	04/13/15 12:58 / lr
Nitrogen, Nitrate+Nitrite as N	2.6	mg/L	D	0.2		E353.2	04/14/15 13:10 / lr
Potassium	6	mg/L		1		E200.7	04/13/15 21:02 / sf
Sodium	105	mg/L		1		E200.7	04/13/15 21:02 / sf
Sulfate	3170	mg/L	D	8		E300.0	04/15/15 00:05 / wc
PHYSICAL PROPERTIES							
pH	6.12	s.u.	H	0.01		A4500-H B	04/13/15 09:27 / lmc
Solids, Total Dissolved TDS @ 180 C	4680	mg/L		40		A2540 C	04/13/15 10:12 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 15:24 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:24 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 17:10 / smm
Cobalt	0.09	mg/L		0.01		E200.8	04/16/15 17:10 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:10 / smm
Manganese	0.62	mg/L		0.01		E200.7	04/15/15 15:24 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:24 / sf
Nickel	0.09	mg/L		0.05		E200.7	04/15/15 15:24 / sf
Uranium	0.0003	mg/L		0.0003		E200.8	04/16/15 17:10 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:24 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 19:02 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 14:57 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	6.6	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	2.1	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	0.3	pCi/L	U			E909.0	04/24/15 17:58 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/24/15 17:58 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 17:58 / eli-cs
Radium 226	1.7	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.40	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	3.0	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.93	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-005
Client Sample ID: EPA-5

Report Date: 05/19/15
Collection Date: 04/08/15 10:05
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.09	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.77	%				A1030 E	04/20/15 07:47 / kbh
Anions	68.2	meq/L				A1030 E	04/20/15 07:47 / kbh
Cations	67.2	meq/L				A1030 E	04/20/15 07:47 / kbh
Solids, Total Dissolved Calculated	4300	mg/L				A1030 E	04/20/15 07:47 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	04/20/15 07:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 06:06 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 06:06 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 06:06 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 06:06 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 06:06 / jlr
Surr: 1,2-Dichlorobenzene-d4	106	%REC		73.7-126		E624	04/14/15 06:06 / jlr
Surr: Dibromofluoromethane	110	%REC		64.4-131		E624	04/14/15 06:06 / jlr
Surr: p-Bromofluorobenzene	98.0	%REC		67.1-133		E624	04/14/15 06:06 / jlr
Surr: Toluene-d8	112	%REC		79.7-125		E624	04/14/15 06:06 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-5	EPA-5	EPA-5	EPA-5
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-005	C15010192-005	C14100554-005	C14070433-005
Bicarbonate as HCO3	mg/L	51	53	48	50
Calcium	mg/L	466	461	451	450
Chloride	mg/L	39	44	37	35
Magnesium	mg/L	475	475	464	497
Nitrogen, Ammonia as N	mg/L	1.12	ND(0.05)	ND(0.05)	0.27
Nitrogen, Nitrate+Nitrite as N	mg/L	2.6	3.6	3.7	2.7
Potassium	mg/L	6	7	6	7
Sodium	mg/L	105	106	99	110
Sulfate	mg/L	3170	3240	3180	3130
pH	s.u.	6.12	5.86	6.15	6.21
Solids, Total Dissolved TDS @ 180 C	mg/L	4680	4600	4660	4640
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.09	0.10	0.10	0.07
Lead	mg/L	ND(0.001)	ND(0.001)	0.002	ND(0.001)
Manganese	mg/L	0.62	0.74	0.80	0.88
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.09	0.09	0.10	0.09
Uranium	mg/L	0.0003	0.0003	0.0004	0.0007
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	6.6 *	1.8 *	1.4	1.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.1	0.7	0.4	0.5
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	0.3	0.2	0.1	-0.05
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.7	1.2	1.4	1.2
Radium 226 precision (±)	pCi/L	0.40	0.31	0.27	0.20
Radium 226 MDC	pCi/L	0.15	0.16	0.19	0.14
Radium 228	pCi/L	3.0	1.7	1.6	1.8
Radium 228 precision (±)	pCi/L	0.93	0.65	1.1	0.92
Radium 228 MDC	pCi/L	1.1	0.93	1.7	1.4
Thorium 230	pCi/L	0.03	0.07	0.05	0.04
Thorium 230 precision (±)	pCi/L	0.09	0.07	0.08	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.1
A/C Balance (± 5)	%	-0.77	-2.12	-2.31	0.89
Anions	meq/L	68.2	69.7	68.2	67.1
Cations	meq/L	67.2	66.8	65.1	68.3
Solids, Total Dissolved Calculated	mg/L	4300	4400	4300	4300
TDS Balance (0.80 - 1.20)		1.08	1.05	1.09	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-006
Client Sample ID: EPA-7

Report Date: 02/27/15
Collection Date: 01/07/15 11:25
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	665	mg/L		5		A2320 B	01/09/15 15:51 / wc
Calcium	486	mg/L		1		E200.7	01/12/15 17:59 / sf
Chloride	277	mg/L	D	5		E300.0	01/09/15 21:26 / wc
Magnesium	886	mg/L		1		E200.7	01/12/15 17:59 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:40 / lr
Nitrogen, Nitrate+Nitrite as N	125	mg/L	D	5		E353.2	01/12/15 13:16 / lr
Potassium	9	mg/L		1		E200.7	01/12/15 17:59 / sf
Sodium	381	mg/L		1		E200.7	01/12/15 17:59 / sf
Sulfate	4450	mg/L	D	20		E300.0	01/09/15 21:26 / wc
PHYSICAL PROPERTIES							
pH	6.25	s.u.	H	0.01		A4500-H B	01/09/15 13:06 / alp
Solids, Total Dissolved TDS @ 180 C	7680	mg/L		100		A2540 C	01/09/15 12:43 / alp
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.7	01/14/15 13:37 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:37 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/14/15 22:36 / clm
Cobalt	0.04	mg/L		0.01		E200.8	01/14/15 22:36 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:36 / clm
Manganese	1.22	mg/L		0.01		E200.7	01/14/15 13:37 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:37 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 13:37 / sf
Uranium	0.0018	mg/L		0.0003		E200.8	01/14/15 22:36 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:37 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 15:01 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:32 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.8	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.5	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	0.01	pCi/L	U			E909.0	01/22/15 23:42 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/22/15 23:42 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 23:42 / eli-cs
Radium 226	1.0	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.22	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.18	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	1.6	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.68	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.09	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-006
Client Sample ID: EPA-7

Report Date: 02/27/15
Collection Date: 01/07/15 11:25
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.77	%				A1030 E	01/16/15 07:33 / kbh
Anions	120	meq/L				A1030 E	01/16/15 07:33 / kbh
Cations	114	meq/L				A1030 E	01/16/15 07:33 / kbh
Solids, Total Dissolved Calculated	7400	mg/L				A1030 E	01/16/15 07:33 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/16/15 07:33 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 03:00 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 03:00 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 03:00 / jlr
Chloroform	0.71	ug/L		0.50		E624	01/14/15 03:00 / jlr
Trihalomethanes, Total	0.71	ug/L		0.50		E624	01/14/15 03:00 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/14/15 03:00 / jlr
Surr: Dibromofluoromethane	118	%REC		64.4-131		E624	01/14/15 03:00 / jlr
Surr: p-Bromofluorobenzene	106	%REC		67.1-133		E624	01/14/15 03:00 / jlr
Surr: Toluene-d8	107	%REC		79.7-125		E624	01/14/15 03:00 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-004
Client Sample ID: EPA-7

Report Date: 05/19/15
Collection Date: 04/08/15 09:25
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	669	mg/L		5		A2320 B	04/10/15 19:45 / wc
Calcium	507	mg/L		1		E200.7	04/13/15 20:58 / sf
Chloride	246	mg/L	D	5		E300.0	04/13/15 12:38 / wc
Magnesium	904	mg/L		1		E200.7	04/13/15 20:58 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 12:53 / lr
Nitrogen, Nitrate+Nitrite as N	129	mg/L	D	10		E353.2	04/14/15 13:07 / lr
Potassium	9	mg/L		1		E200.7	04/13/15 20:58 / sf
Sodium	395	mg/L	D	2		E200.7	04/13/15 20:58 / sf
Sulfate	4280	mg/L	D	20		E300.0	04/14/15 23:47 / wc
PHYSICAL PROPERTIES							
pH	6.36	s.u.	H	0.01		A4500-H B	04/13/15 09:24 / lmc
Solids, Total Dissolved TDS @ 180 C	7790	mg/L		100		A2540 C	04/13/15 10:11 / lmc
METALS - TOTAL							
Aluminum	0.3	mg/L		0.1		E200.8	04/16/15 17:07 / smm
Beryllium	ND	mg/L		0.001		E200.8	04/16/15 17:07 / smm
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 17:07 / smm
Cobalt	0.05	mg/L		0.01		E200.8	04/16/15 17:07 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:07 / smm
Manganese	1.29	mg/L		0.01		E200.7	04/15/15 15:20 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:20 / sf
Nickel	0.08	mg/L		0.05		E200.7	04/15/15 15:20 / sf
Uranium	0.0015	mg/L		0.0003		E200.8	04/16/15 17:07 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:20 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 18:26 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 14:55 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	5.5	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U Precision (±)	2.0	pCi/L				E900.1	04/15/15 21:15 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:15 / trs
Lead 210	-0.5	pCi/L	U			E909.0	04/24/15 16:15 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/24/15 16:15 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 16:15 / eli-cs
Radium 226	1.2	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.30	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.16	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	1.3	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.69	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-004
Client Sample ID: EPA-7

Report Date: 05/19/15
Collection Date: 04/08/15 09:25
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.06	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.08	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.60	%				A1030 E	04/20/15 07:47 / kbh
Anions	116	meq/L				A1030 E	04/20/15 07:47 / kbh
Cations	117	meq/L				A1030 E	04/20/15 07:47 / kbh
Solids, Total Dissolved Calculated	7200	mg/L				A1030 E	04/20/15 07:47 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	04/20/15 07:47 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 05:31 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 05:31 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 05:31 / jlr
Chloroform	0.57	ug/L		0.50		E624	04/14/15 05:31 / jlr
Trihalomethanes, Total	0.57	ug/L		0.50		E624	04/14/15 05:31 / jlr
Surr: 1,2-Dichlorobenzene-d4	110	%REC		73.7-126		E624	04/14/15 05:31 / jlr
Surr: Dibromofluoromethane	115	%REC		64.4-131		E624	04/14/15 05:31 / jlr
Surr: p-Bromofluorobenzene	100	%REC		67.1-133		E624	04/14/15 05:31 / jlr
Surr: Toluene-d8	108	%REC		79.7-125		E624	04/14/15 05:31 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-7	EPA-7	EPA-7	EPA-7
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-004	C15010192-006	C14100554-004	C14070433-004
Bicarbonate as HCO3	mg/L	669	665	685	678
Calcium	mg/L	507	486	486	490
Chloride	mg/L	246	277	234	229
Magnesium	mg/L	904	886	882	929
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.05
Nitrogen, Nitrate+Nitrite as N	mg/L	129	125	122	126
Potassium	mg/L	9	9	8	9
Sodium	mg/L	395	381	372	410
Sulfate	mg/L	4280	4450	4310	4310
pH	s.u.	6.36	6.25	6.38	6.46
Solids, Total Dissolved TDS @ 180 C	mg/L	7790	7680	7720	7610
Aluminum	mg/L	0.3	0.3	0.2	0.2
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.05	0.04	0.04	0.03
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.29	1.22	1.30	1.40
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.08	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0015	0.0018	0.0023	0.0017
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	5.5 *	0.8 *	0.6	0.5
Gross Alpha minus Rn & U Precision (±)	pCi/L	2.0	0.5	0.3	0.4
Gross Alpha minus Rn & U MDC	pCi/L	1.6	0.6	0.4	0.6
Lead 210	pCi/L	-0.5	0.01	-0.6	-0.09
Lead 210 precision (±)	pCi/L	0.7	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.2	1.0	1.2	0.42
Radium 226 precision (±)	pCi/L	0.30	0.22	0.28	0.14
Radium 226 MDC	pCi/L	0.16	0.18	0.23	0.15
Radium 228	pCi/L	1.3	1.6	1.6	3.8
Radium 228 precision (±)	pCi/L	0.69	0.68	1.1	1.1
Radium 228 MDC	pCi/L	1.1	1.0	1.7	1.5
Thorium 230	pCi/L	0.06	0.09	0.05	0.02
Thorium 230 precision (±)	pCi/L	0.08	0.08	0.08	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.1
A/C Balance (± 5)	%	0.60	-2.77	-1.35	1.17
Anions	meq/L	116	120	116	116
Cations	meq/L	117	114	113	119
Solids, Total Dissolved Calculated	mg/L	7200	7400	7200	7300
TDS Balance (0.80 - 1.20)		1.08	1.04	1.08	1.05
Trihalomethanes, Total	ug/L	0.57	0.71	ND(0.50)	0.71

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2015

ZONE-3

*517

EPA-14

420

*711

*613

*708

EPA-13

717

719

LEVELS ONLY

EPA-9

702

710

712

713

714

701

706

707

402

446

424

NOTE: *POINT OF COMPLIANCE WELLS
WATER LEVEL ONLY IS IN FIELD DATA SHEET

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-002
Client Sample ID: 517

Report Date: 02/27/15
Collection Date: 01/12/15 10:15
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 19:07 / wc
Calcium	446	mg/L		1		E200.7	01/21/15 18:37 / sf
Chloride	38	mg/L	D	2		E300.0	01/20/15 09:49 / wc
Magnesium	521	mg/L		1		E200.7	01/21/15 18:37 / sf
Nitrogen, Ammonia as N	9.0	mg/L	D	0.5		A4500-NH3 G	01/21/15 13:04 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:09 / lr
Potassium	12	mg/L		1		E200.7	01/21/15 18:37 / sf
Sodium	147	mg/L		1		E200.7	01/21/15 18:37 / sf
Sulfate	4000	mg/L	D	8		E300.0	01/20/15 09:49 / wc
PHYSICAL PROPERTIES							
pH	2.99	s.u.	H	0.01		A4500-H B	01/19/15 11:26 / alp
Solids, Total Dissolved TDS @ 180 C	5840	mg/L		100		A2540 C	01/19/15 08:47 / alp
METALS - TOTAL							
Aluminum	18.9	mg/L		0.1		E200.7	01/21/15 16:25 / sf
Beryllium	0.015	mg/L		0.001		E200.7	01/21/15 16:25 / sf
Cadmium	0.012	mg/L		0.005		E200.8	01/21/15 15:51 / clm
Cobalt	0.93	mg/L		0.01		E200.8	01/21/15 15:51 / clm
Lead	0.023	mg/L		0.001		E200.8	01/21/15 15:51 / clm
Manganese	12.5	mg/L		0.01		E200.7	01/21/15 16:25 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 16:25 / sf
Nickel	0.96	mg/L		0.05		E200.8	01/21/15 15:51 / clm
Uranium	0.272	mg/L		0.0003		E200.8	01/21/15 15:51 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:25 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/15 13:52 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:18 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	67.6	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U Precision (±)	13.4	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U MDC	1.0	pCi/L				E900.1	01/23/15 11:12 / dmf
Lead 210	0.9	pCi/L	U			E909.0	02/06/15 18:59 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/15 18:59 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/06/15 18:59 / eli-cs
Radium 226	11	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	2.1	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	7.8	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-002
Client Sample ID: 517

Report Date: 02/27/15
Collection Date: 01/12/15 10:15
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	18.9	pCi/L				E908.0	02/11/15 09:07 / dmf
Thorium 230 precision (±)	3.6	pCi/L				E908.0	02/11/15 09:07 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	02/11/15 09:07 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.84	%				A1030 E	01/26/15 09:04 / kbh
Anions	84.5	meq/L				A1030 E	01/26/15 09:04 / kbh
Cations	83.1	meq/L				A1030 E	01/26/15 09:04 / kbh
Solids, Total Dissolved Calculated	5200	mg/L				A1030 E	01/26/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	01/26/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/20/15 13:47 / jlr
Bromoform	ND	ug/L		0.50		E624	01/20/15 13:47 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/20/15 13:47 / jlr
Chloroform	4.68	ug/L		0.50		E624	01/20/15 13:47 / jlr
Trihalomethanes, Total	4.68	ug/L		0.50		E624	01/20/15 13:47 / jlr
Surr: 1,2-Dichlorobenzene-d4	123	%REC		73.7-126		E624	01/20/15 13:47 / jlr
Surr: Dibromofluoromethane	110	%REC		64.4-131		E624	01/20/15 13:47 / jlr
Surr: p-Bromofluorobenzene	116	%REC		67.1-133		E624	01/20/15 13:47 / jlr
Surr: Toluene-d8	95.0	%REC		79.7-125		E624	01/20/15 13:47 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-002
Client Sample ID: 517

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 09:30
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 16:21 / wc
Calcium	450	mg/L		1		E200.7	04/21/15 16:00 / sf
Chloride	38	mg/L	D	2		E300.0	04/21/15 19:56 / wc
Magnesium	532	mg/L		1		E200.7	04/21/15 16:00 / sf
Nitrogen, Ammonia as N	8.3	mg/L	D	0.2		A4500-NH3 G	04/21/15 13:24 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:11 / lr
Potassium	12	mg/L		1		E200.7	04/22/15 15:25 / sf
Sodium	147	mg/L		1		E200.7	04/21/15 16:00 / sf
Sulfate	3900	mg/L	D	8		E300.0	04/21/15 19:56 / wc
PHYSICAL PROPERTIES							
pH	2.80	s.u.	H	0.01		A4500-H B	04/20/15 15:40 / lmc
Solids, Total Dissolved TDS @ 180 C	5780	mg/L	H	40		A2540 C	04/20/15 09:43 / lmc
METALS - TOTAL							
Aluminum	18.0	mg/L		0.1		E200.7	04/21/15 18:10 / sf
Beryllium	0.014	mg/L		0.001		E200.7	04/21/15 18:10 / sf
Cadmium	0.008	mg/L		0.005		E200.7	04/21/15 18:10 / sf
Cobalt	0.91	mg/L		0.01		E200.8	04/21/15 23:38 / clm
Lead	0.024	mg/L		0.001		E200.8	04/21/15 23:38 / clm
Manganese	11.9	mg/L		0.01		E200.7	04/21/15 18:10 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:10 / sf
Nickel	0.92	mg/L		0.05		E200.7	04/21/15 18:10 / sf
Uranium	0.267	mg/L		0.0003		E200.8	04/21/15 23:38 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:10 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 20:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:00 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	82.2	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U Precision (±)	16.3	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U MDC	1.2	pCi/L				E900.1	04/22/15 11:52 / plj
Lead 210	1.6	pCi/L				E909.0	05/01/15 06:14 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	05/01/15 06:14 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 06:14 / eli-cs
Radium 226	5.7	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 precision (±)	1.1	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 MDC	0.13	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 228	6.2	pCi/L				RA-05	04/28/15 12:27 / plj
Radium 228 precision (±)	1.4	pCi/L				RA-05	04/28/15 12:27 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/28/15 12:27 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-002
Client Sample ID: 517

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 09:30
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	12.9	pCi/L				E908.0	05/11/15 17:38 / cng
Thorium 230 precision (±)	2.4	pCi/L				E908.0	05/11/15 17:38 / cng
Thorium 230 MDC	0.5	pCi/L				E908.0	05/11/15 17:38 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	1.00	%				A1030 E	05/20/15 12:22 / sdw
Anions	82.4	meq/L				A1030 E	05/20/15 12:22 / sdw
Cations	84.1	meq/L				A1030 E	05/20/15 12:22 / sdw
Solids, Total Dissolved Calculated	5100	mg/L				A1030 E	05/20/15 12:22 / sdw
TDS Balance (0.80 - 1.20)	1.13					A1030 E	05/20/15 12:22 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 14:31 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 14:31 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 14:31 / jlr
Chloroform	3.41	ug/L		0.50		E624	04/20/15 14:31 / jlr
Trihalomethanes, Total	3.41	ug/L		0.50		E624	04/20/15 14:31 / jlr
Surr: 1,2-Dichlorobenzene-d4	108	%REC		73.7-126		E624	04/20/15 14:31 / jlr
Surr: Dibromofluoromethane	110	%REC		64.4-131		E624	04/20/15 14:31 / jlr
Surr: p-Bromofluorobenzene	108	%REC		67.1-133		E624	04/20/15 14:31 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/20/15 14:31 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		517	517	517	517
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-002	C15010404-002	C14100756-002	C14070667-007
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	450	446	449	438
Chloride	mg/L	38	38	42	40
Magnesium	mg/L	532	521	523	490
Nitrogen, Ammonia as N	mg/L	8.3	9.0	9.2	9.6
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	12	12	12	12
Sodium	mg/L	147	147	145	144
Sulfate	mg/L	3900	4000	4110	4170
pH	s.u.	2.80	2.99	2.91	3.21
Solids, Total Dissolved TDS @ 180 C	mg/L	5780	5840	5760	5570
Aluminum	mg/L	18.0	18.9	17.9	16.9
Beryllium	mg/L	0.014	0.015	0.015	0.014
Cadmium	mg/L	0.008	0.012	0.010	0.008
Cobalt	mg/L	0.91	0.93	0.94	0.92
Lead	mg/L	0.024	0.023	0.016	0.022
Manganese	mg/L	11.9	12.5	12.4	12.1
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.92	0.96	1.01	1.00
Uranium	mg/L	0.267	0.272	0.264	0.213
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	82.2 *	67.6 *	13.3	11.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	16.3	13.4	1.1	1.2
Gross Alpha minus Rn & U MDC	pCi/L	1.2	1.0	0.4	0.5
Lead 210	pCi/L	1.6	0.9	1.7	0.8
Lead 210 precision (±)	pCi/L	0.9	0.6	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	5.7	11	9.0	5.4
Radium 226 precision (±)	pCi/L	1.1	2.1	0.54	0.43
Radium 226 MDC	pCi/L	0.13	0.15	0.16	0.13
Radium 228	pCi/L	6.2	7.8	8.7	3.5
Radium 228 precision (±)	pCi/L	1.4	1.6	1.5	0.65
Radium 228 MDC	pCi/L	1.1	1.3	1.9	0.80
Thorium 230	pCi/L	12.9	18.9	11.2	17.1
Thorium 230 precision (±)	pCi/L	2.4	3.6	1.8	3.4
Thorium 230 MDC	pCi/L	0.5	0.6	0.3	0.4
A/C Balance (± 5)	%	1.00	-0.84	-2.50	-5.01
Anions	meq/L	82.4	84.5	87.0	88.3
Cations	meq/L	84.1	83.1	82.8	79.8
Solids, Total Dissolved Calculated	mg/L	5100	5200	5300	5300
TDS Balance (0.80 - 1.20)		1.13	1.12	1.08	1.05
Trihalomethanes, Total	ug/L	3.41	4.68	4.80	5.60

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-008
Client Sample ID: EPA-14

Report Date: 02/27/15
Collection Date: 01/12/15 16:40
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	39	mg/L		5		A2320 B	01/19/15 20:18 / wc
Calcium	497	mg/L		1		E200.7	01/21/15 19:12 / sf
Chloride	53	mg/L	D	2		E300.0	01/20/15 12:43 / wc
Magnesium	303	mg/L		1		E200.7	01/21/15 19:12 / sf
Nitrogen, Ammonia as N	16	mg/L	D	2		A4500-NH3 G	01/21/15 13:15 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:34 / lr
Potassium	11	mg/L		1		E200.7	01/21/15 19:12 / sf
Sodium	152	mg/L		1		E200.7	01/21/15 19:12 / sf
Sulfate	2810	mg/L	D	8		E300.0	01/20/15 12:43 / wc
PHYSICAL PROPERTIES							
pH	5.44	s.u.	H	0.01		A4500-H B	01/19/15 12:48 / alp
Solids, Total Dissolved TDS @ 180 C	4040	mg/L		30		A2540 C	01/19/15 08:48 / alp
METALS - TOTAL							
Aluminum	6.3	mg/L		0.1		E200.7	01/21/15 17:00 / sf
Beryllium	0.002	mg/L		0.001		E200.7	01/21/15 17:00 / sf
Cadmium	0.005	mg/L		0.005		E200.8	01/21/15 16:25 / clm
Cobalt	0.34	mg/L		0.01		E200.8	01/21/15 16:25 / clm
Lead	0.006	mg/L		0.001		E200.8	01/21/15 16:25 / clm
Manganese	8.92	mg/L		0.01		E200.7	01/21/15 17:00 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 17:00 / sf
Nickel	0.30	mg/L		0.05		E200.8	01/21/15 16:25 / clm
Uranium	0.0044	mg/L		0.0003		E200.8	01/21/15 16:25 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 17:00 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 16:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:41 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	22.4	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	4.9	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	0.8	pCi/L	U			E909.0	02/07/15 05:12 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 05:12 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 05:12 / eli-cs
Radium 226	7.2	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	1.4	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	11	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	2.2	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - *Quality control limit.*
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - *Not detected at the reporting limit.*
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-008
Client Sample ID: EPA-14

Report Date: 02/27/15
Collection Date: 01/12/15 16:40
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.6	pCi/L				E908.0	02/02/15 09:59 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E908.0	02/02/15 09:59 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	02/02/15 09:59 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.40	%				A1030 E	01/26/15 09:05 / kbh
Anions	60.6	meq/L				A1030 E	01/26/15 09:05 / kbh
Cations	57.8	meq/L				A1030 E	01/26/15 09:05 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	01/26/15 09:05 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/26/15 09:05 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 21:02 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 21:02 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 21:02 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 21:02 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 21:02 / jlr
Surr: 1,2-Dichlorobenzene-d4	124	%REC		73.7-126		E624	01/16/15 21:02 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	01/16/15 21:02 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/16/15 21:02 / jlr
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	01/16/15 21:02 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-008
Client Sample ID: EPA-14

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 09:35
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	60	mg/L		5		A2320 B	04/20/15 16:57 / wc
Calcium	496	mg/L		1		E200.7	04/21/15 17:11 / sf
Chloride	53	mg/L		1		E300.0	04/21/15 22:33 / wc
Magnesium	285	mg/L		1		E200.7	04/21/15 17:11 / sf
Nitrogen, Ammonia as N	15	mg/L	D	1		A4500-NH3 G	04/21/15 13:29 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:41 / lr
Potassium	11	mg/L		1		E200.7	04/22/15 16:08 / sf
Sodium	149	mg/L		1		E200.7	04/21/15 17:11 / sf
Sulfate	2620	mg/L	D	4		E300.0	04/21/15 22:33 / wc
PHYSICAL PROPERTIES							
pH	5.80	s.u.	H	0.01		A4500-H B	04/24/15 09:54 / lmc
Solids, Total Dissolved TDS @ 180 C	3990	mg/L		20		A2540 C	04/20/15 09:48 / lmc
METALS - TOTAL							
Aluminum	17.0	mg/L		0.1		E200.7	04/21/15 18:54 / sf
Beryllium	0.006	mg/L		0.001		E200.7	04/21/15 18:54 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 18:54 / sf
Cobalt	0.27	mg/L		0.01		E200.8	04/22/15 00:14 / clm
Lead	0.005	mg/L		0.001		E200.8	04/22/15 00:14 / clm
Manganese	7.67	mg/L		0.01		E200.7	04/21/15 18:54 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:54 / sf
Nickel	0.22	mg/L		0.05		E200.7	04/21/15 18:54 / sf
Uranium	0.0120	mg/L		0.0003		E200.8	04/22/15 00:14 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:54 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/15 14:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:12 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	34.1	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	7.2	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	0.4	pCi/L	U			E909.0	05/01/15 16:30 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 16:30 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 16:30 / eli-cs
Radium 226	4.9	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	1.0	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	5.6	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	1.4	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-008
Client Sample ID: EPA-14

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 09:35
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.2	pCi/L	U			E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	0.6	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	1.8	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.90	%				A1030 E	05/20/15 12:27 / sdw
Anions	57.1	meq/L				A1030 E	05/20/15 12:27 / sdw
Cations	56.1	meq/L				A1030 E	05/20/15 12:27 / sdw
Solids, Total Dissolved Calculated	3600	mg/L				A1030 E	05/20/15 12:27 / sdw
TDS Balance (0.80 - 1.20)	1.09					A1030 E	05/20/15 12:27 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 18:00 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 18:00 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 18:00 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 18:00 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 18:00 / jlr
Surr: 1,2-Dichlorobenzene-d4	114	%REC		73.7-126		E624	04/20/15 18:00 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	04/20/15 18:00 / jlr
Surr: p-Bromofluorobenzene	115	%REC		67.1-133		E624	04/20/15 18:00 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/20/15 18:00 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		EPA-14	EPA-14	EPA-14	EPA-14
Collection Date:		4/14/2015	1/12/2015	10/13/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-008	C15010404-008	C14100756-008	C14070667-006
Bicarbonate as HCO3	mg/L	60	39	ND(5)	ND(5)
Calcium	mg/L	496	497	496	515
Chloride	mg/L	53	53	58	62
Magnesium	mg/L	285	303	346	394
Nitrogen, Ammonia as N	mg/L	15	16	25	39
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	0.1	ND(0.1)
Potassium	mg/L	11	11	12	13
Sodium	mg/L	149	152	159	163
Sulfate	mg/L	2620	2810	3020	3540
pH	s.u.	5.80	5.44	4.94	4.39
Solids, Total Dissolved TDS @ 180 C	mg/L	3990	4040	4370	4810
Aluminum	mg/L	17.0	6.3	12.9	21.9
Beryllium	mg/L	0.006	0.002	0.010	0.020
Cadmium	mg/L	ND(0.005)	0.005	0.006	0.008
Cobalt	mg/L	0.27	0.34	0.42	0.70
Lead	mg/L	0.005	0.006	0.007	0.009
Manganese	mg/L	7.67	8.92	10.1	13.9
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.22	0.30	0.39	0.69
Uranium	mg/L	0.0120	0.0044	0.0128	0.0237
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	34.1 *	22.4 *	10.3	9.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	7.2	4.9	1	1.1
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	0.4	0.8	1	1.3
Lead 210 precision (±)	pCi/L	0.8	0.6	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	4.9	7.2	8.8	7.4
Radium 226 precision (±)	pCi/L	1.0	1.4	0.54	0.50
Radium 226 MDC	pCi/L	0.14	0.15	0.16	0.13
Radium 228	pCi/L	5.6	11	13	9.5
Radium 228 precision (±)	pCi/L	1.4	2.2	2.0	0.85
Radium 228 MDC	pCi/L	1.4	1.3	2.3	0.80
Thorium 230	pCi/L	-0.2	0.6	0.7	0.2
Thorium 230 precision (±)	pCi/L	0.6	0.4	0.6	0.3
Thorium 230 MDC	pCi/L	1.8	0.6	1	0.5
A/C Balance (± 5)	%	-0.90	-2.40	-2.03	-3.41
Anions	meq/L	57.1	60.6	64.8	75.6
Cations	meq/L	56.1	57.8	62.2	70.7
Solids, Total Dissolved Calculated	mg/L	3600	3800	4100	4700
TDS Balance (0.80 - 1.20)		1.09	1.05	1.06	1.02
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-007
Client Sample ID: 420

Report Date: 02/27/15
Collection Date: 01/12/15 15:47
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	415	mg/L		5		A2320 B	01/19/15 20:03 / wc
Calcium	745	mg/L		1		E200.7	01/21/15 19:08 / sf
Chloride	51	mg/L	D	2		E300.0	01/20/15 12:26 / wc
Magnesium	169	mg/L		1		E200.7	01/21/15 19:08 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 12:27 / lr
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	01/16/15 15:31 / lr
Potassium	7	mg/L		1		E200.7	01/21/15 19:08 / sf
Sodium	155	mg/L		1		E200.7	01/21/15 19:08 / sf
Sulfate	2470	mg/L	D	8		E300.0	01/20/15 12:26 / wc
PHYSICAL PROPERTIES							
pH	6.99	s.u.	H	0.01		A4500-H B	01/19/15 12:45 / alp
Solids, Total Dissolved TDS @ 180 C	4000	mg/L		40		A2540 C	01/19/15 08:48 / alp
METALS - TOTAL							
Aluminum	1.9	mg/L		0.1		E200.7	01/21/15 16:56 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/21/15 16:56 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 16:21 / clm
Cobalt	0.03	mg/L		0.01		E200.8	01/21/15 16:21 / clm
Lead	0.005	mg/L		0.001		E200.8	01/21/15 16:21 / clm
Manganese	2.11	mg/L		0.01		E200.7	01/21/15 16:56 / sf
Molybdenum	1.2	mg/L		0.1		E200.7	01/21/15 16:56 / sf
Nickel	0.07	mg/L		0.05		E200.8	01/21/15 16:21 / clm
Uranium	0.344	mg/L		0.0003		E200.8	01/21/15 16:21 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:56 / sf
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	01/26/15 15:54 / eli-h
Selenium-IV	0.002	mg/L		0.001		A3114 B	02/02/15 12:40 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	11.0	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	2.7	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	1.7	pCi/L				E909.0	02/07/15 03:30 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/07/15 03:30 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 03:30 / eli-cs
Radium 226	5.3	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	1.1	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	5.4	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-007
Client Sample ID: 420

Report Date: 02/27/15
Collection Date: 01/12/15 15:47
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	01/26/15 13:25 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.37	%				A1030 E	01/26/15 09:05 / kbh
Anions	59.6	meq/L				A1030 E	01/26/15 09:05 / kbh
Cations	58.0	meq/L				A1030 E	01/26/15 09:05 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	01/26/15 09:05 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	01/26/15 09:05 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 20:27 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 20:27 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 20:27 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 20:27 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 20:27 / jlr
Surr: 1,2-Dichlorobenzene-d4	125	%REC		73.7-126		E624	01/16/15 20:27 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/16/15 20:27 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/16/15 20:27 / jlr
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	01/16/15 20:27 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-007
Client Sample ID: 420

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 15:45
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	398	mg/L		5		A2320 B	04/20/15 16:51 / wc
Calcium	687	mg/L		1		E200.7	04/21/15 16:28 / sf
Chloride	54	mg/L		1		E300.0	04/21/15 21:24 / wc
Magnesium	167	mg/L		1		E200.7	04/21/15 16:28 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/21/15 13:03 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:38 / lr
Potassium	7	mg/L		1		E200.7	04/22/15 16:04 / sf
Sodium	154	mg/L		1		E200.7	04/21/15 16:28 / sf
Sulfate	2380	mg/L	D	4		E300.0	04/21/15 21:24 / wc
PHYSICAL PROPERTIES							
pH	7.22	s.u.	H	0.01		A4500-H B	04/24/15 09:50 / lmc
Solids, Total Dissolved TDS @ 180 C	3990	mg/L		20		A2540 C	04/20/15 09:48 / lmc
METALS - TOTAL							
Aluminum	1.5	mg/L		0.1		E200.7	04/21/15 18:39 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/21/15 18:39 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 18:39 / sf
Cobalt	0.02	mg/L		0.01		E200.8	04/22/15 00:02 / clm
Lead	0.003	mg/L		0.001		E200.8	04/22/15 00:02 / clm
Manganese	1.68	mg/L		0.01		E200.7	04/21/15 18:39 / sf
Molybdenum	0.9	mg/L		0.1		E200.8	04/22/15 00:02 / clm
Nickel	0.05	mg/L		0.05		E200.7	04/21/15 18:39 / sf
Uranium	0.359	mg/L		0.0003		E200.8	04/22/15 00:02 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:39 / sf
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	05/06/15 12:02 / eli-h
Selenium-IV	0.001	mg/L		0.001		A3114 B	05/15/15 11:11 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	16.0	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	3.8	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	1.5	pCi/L				E909.0	05/01/15 14:47 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 14:47 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 14:47 / eli-cs
Radium 226	4.6	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	0.94	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	4.4	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-007
Client Sample ID: 420

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 15:45
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.08	pCi/L	U			E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	0.08	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	0.1	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.44	%				A1030 E	05/20/15 12:26 / sdw
Anions	57.7	meq/L				A1030 E	05/20/15 12:26 / sdw
Cations	54.9	meq/L				A1030 E	05/20/15 12:26 / sdw
Solids, Total Dissolved Calculated	3700	mg/L				A1030 E	05/20/15 12:26 / sdw
TDS Balance (0.80 - 1.20)	1.09					A1030 E	05/20/15 12:26 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 17:26 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 17:26 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 17:26 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 17:26 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 17:26 / jlr
Surr: 1,2-Dichlorobenzene-d4	116	%REC		73.7-126		E624	04/20/15 17:26 / jlr
Surr: Dibromofluoromethane	120	%REC		64.4-131		E624	04/20/15 17:26 / jlr
Surr: p-Bromofluorobenzene	115	%REC		67.1-133		E624	04/20/15 17:26 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/20/15 17:26 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		420	420	420	420
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-007	C15010404-007	C14100756-007	C14070667-003
Bicarbonate as HCO3	mg/L	398	415	434	427
Calcium	mg/L	687	745	736	765
Chloride	mg/L	54	51	55	52
Magnesium	mg/L	167	169	162	169
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	0.1	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	7
Sodium	mg/L	154	155	157	157
Sulfate	mg/L	2380	2470	2460	2330
pH	s.u.	7.22	6.99	6.97	7.07
Solids, Total Dissolved TDS @ 180 C	mg/L	3990	4000	4000	3680
Aluminum	mg/L	1.5	1.9	1.4	1.3
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.02	0.03	0.02	0.01
Lead	mg/L	0.003	0.005	0.005	0.004
Manganese	mg/L	1.68	2.11	1.86	1.18
Molybdenum	mg/L	0.9	1.2	1.3	1.3
Nickel	mg/L	0.05	0.07	ND(0.05)	ND(0.05)
Uranium	mg/L	0.359	0.344	0.337	0.386
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.002	0.002	ND(0.001)	0.002
Selenium-IV	mg/L	0.001	0.002	0.003	0.002
Gross Alpha minus Rn & U	pCi/L	16.0 *	11.0 *	6.0	6.0
Gross Alpha minus Rn & U Precision (±)	pCi/L	3.8	2.7	0.8	0.9
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	1.5	1.7	0.8	0.5
Lead 210 precision (±)	pCi/L	0.8	0.7	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	4.6	5.3	6.3	5.2
Radium 226 precision (±)	pCi/L	0.94	1.1	0.46	0.45
Radium 226 MDC	pCi/L	0.14	0.17	0.17	0.15
Radium 228	pCi/L	4.4	5.4	10	5.9
Radium 228 precision (±)	pCi/L	1.2	1.2	1.9	0.80
Radium 228 MDC	pCi/L	1.4	1.5	2.3	0.90
Thorium 230	pCi/L	0.08	0.2	0.3	0.5
Thorium 230 precision (±)	pCi/L	0.08	0.09	0.1	0.2
Thorium 230 MDC	pCi/L	0.1	0.07	0.2	0.2
A/C Balance (± 5)	%	-2.44	-1.37	-2.48	1.83
Anions	meq/L	57.7	59.6	60.0	57.0
Cations	meq/L	54.9	58.0	57.1	59.1
Solids, Total Dissolved Calculated	mg/L	3700	3800	3800	3700
TDS Balance (0.80 - 1.20)		1.09	1.05	1.05	1.00
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-004
Client Sample ID: 711

Report Date: 02/27/15
Collection Date: 01/12/15 12:55
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 19:13 / wc
Calcium	455	mg/L		1		E200.7	01/21/15 18:56 / sf
Chloride	19	mg/L	D	2		E300.0	01/20/15 10:24 / wc
Magnesium	457	mg/L		1		E200.7	01/21/15 18:56 / sf
Nitrogen, Ammonia as N	0.77	mg/L		0.05		A4500-NH3 G	01/21/15 12:14 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:19 / lr
Potassium	10	mg/L		1		E200.7	01/21/15 18:56 / sf
Sodium	104	mg/L		1		E200.7	01/21/15 18:56 / sf
Sulfate	3370	mg/L	D	8		E300.0	01/20/15 10:24 / wc
PHYSICAL PROPERTIES							
pH	3.13	s.u.	H	0.01		A4500-H B	01/19/15 12:32 / alp
Solids, Total Dissolved TDS @ 180 C	4780	mg/L		50		A2540 C	01/19/15 08:47 / alp
METALS - TOTAL							
Aluminum	0.5	mg/L		0.1		E200.7	01/21/15 16:33 / sf
Beryllium	0.004	mg/L		0.001		E200.7	01/21/15 16:33 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 16:11 / clm
Cobalt	0.31	mg/L		0.01		E200.8	01/21/15 16:11 / clm
Lead	0.012	mg/L		0.001		E200.8	01/21/15 16:11 / clm
Manganese	5.26	mg/L		0.01		E200.7	01/21/15 16:33 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 16:33 / sf
Nickel	0.31	mg/L		0.05		E200.8	01/21/15 16:11 / clm
Uranium	0.0213	mg/L		0.0003		E200.8	01/21/15 16:11 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:33 / sf
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	01/23/15 14:16 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:21 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	14.3	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	3.3	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	0.3	pCi/L	U			E909.0	02/06/15 22:24 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/15 22:24 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/06/15 22:24 / eli-cs
Radium 226	5.2	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	1.1	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.14	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	8.9	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	1.8	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-004
Client Sample ID: 711

Report Date: 02/27/15
Collection Date: 01/12/15 12:55
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L	U			E908.0	02/02/15 09:59 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	02/02/15 09:59 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	02/02/15 09:59 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.87	%				A1030 E	01/26/15 09:04 / kbh
Anions	70.7	meq/L				A1030 E	01/26/15 09:04 / kbh
Cations	69.5	meq/L				A1030 E	01/26/15 09:04 / kbh
Solids, Total Dissolved Calculated	4400	mg/L				A1030 E	01/26/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	01/26/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 18:42 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 18:42 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 18:42 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 18:42 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 18:42 / jlr
Surr: 1,2-Dichlorobenzene-d4	115	%REC		73.7-126		E624	01/16/15 18:42 / jlr
Surr: Dibromofluoromethane	97.0	%REC		64.4-131		E624	01/16/15 18:42 / jlr
Surr: p-Bromofluorobenzene	118	%REC		67.1-133		E624	01/16/15 18:42 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	01/16/15 18:42 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-004
Client Sample ID: 711

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 12:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 16:27 / wc
Calcium	454	mg/L		1		E200.7	04/21/15 16:16 / sf
Chloride	22	mg/L		1		E300.0	04/21/15 20:31 / wc
Magnesium	460	mg/L		1		E200.7	04/21/15 16:16 / sf
Nitrogen, Ammonia as N	1.14	mg/L		0.05		A4500-NH3 G	04/21/15 12:50 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:31 / lr
Potassium	11	mg/L		1		E200.7	04/22/15 15:33 / sf
Sodium	107	mg/L		1		E200.7	04/21/15 16:16 / sf
Sulfate	3410	mg/L	D	4		E300.0	04/21/15 20:31 / wc
PHYSICAL PROPERTIES							
pH	3.21	s.u.	H	0.01		A4500-H B	04/24/15 09:36 / lmc
Solids, Total Dissolved TDS @ 180 C	4950	mg/L		20		A2540 C	04/20/15 09:45 / lmc
METALS - TOTAL							
Aluminum	0.9	mg/L		0.1		E200.7	04/21/15 18:26 / sf
Beryllium	0.005	mg/L		0.001		E200.7	04/21/15 18:26 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 18:26 / sf
Cobalt	0.35	mg/L		0.01		E200.8	04/21/15 23:52 / clm
Lead	0.012	mg/L		0.001		E200.8	04/21/15 23:52 / clm
Manganese	5.58	mg/L		0.01		E200.7	04/21/15 18:26 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:26 / sf
Nickel	0.33	mg/L		0.05		E200.7	04/21/15 18:26 / sf
Uranium	0.0307	mg/L		0.0003		E200.8	04/21/15 23:52 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:26 / sf
METALS - SPECIATED							
Arsenic-III	0.002	mg/L		0.001		E1632AM	05/01/15 12:51 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:03 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	22.5	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	5.0	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	0.9	pCi/L	U			E909.0	05/01/15 09:39 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 09:39 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 09:39 / eli-cs
Radium 226	5.2	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 precision (±)	1.1	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 228	6.4	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	1.6	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-004
Client Sample ID: 711

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 12:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.02	pCi/L	U			E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	0.2	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	0.6	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.04	%				A1030 E	05/20/15 12:25 / sdw
Anions	71.7	meq/L				A1030 E	05/20/15 12:25 / sdw
Cations	70.2	meq/L				A1030 E	05/20/15 12:25 / sdw
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	05/20/15 12:25 / sdw
TDS Balance (0.80 - 1.20)	1.10					A1030 E	05/20/15 12:25 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 15:41 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 15:41 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 15:41 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 15:41 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 15:41 / jlr
Surr: 1,2-Dichlorobenzene-d4	115	%REC		73.7-126		E624	04/20/15 15:41 / jlr
Surr: Dibromofluoromethane	104	%REC		64.4-131		E624	04/20/15 15:41 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/20/15 15:41 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/20/15 15:41 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		711	711	711	711
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-004	C15010404-004	C14100756-004	C14070667-010
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	454	455	457	455
Chloride	mg/L	22	19	20	18
Magnesium	mg/L	460	457	446	429
Nitrogen, Ammonia as N	mg/L	1.14	0.77	0.62	0.46
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	11	10	10	11
Sodium	mg/L	107	104	101	102
Sulfate	mg/L	3410	3370	3400	3320
pH	s.u.	3.21	3.13	3.07	3.11
Solids, Total Dissolved TDS @ 180 C	mg/L	4950	4780	4790	4580
Aluminum	mg/L	0.9	0.5	0.3	0.3
Beryllium	mg/L	0.005	0.004	0.003	0.003
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.35	0.31	0.29	0.26
Lead	mg/L	0.012	0.012	0.020	0.010
Manganese	mg/L	5.58	5.26	4.98	4.82
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.33	0.31	0.28	0.26
Uranium	mg/L	0.0307	0.0213	0.140	0.0192
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.002	0.002	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	22.5 *	14.3 *	6.4	4.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	5.0	3.3	0.8	0.7
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	0.9	0.3	0.09	0.1
Lead 210 precision (±)	pCi/L	0.8	0.6	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	5.2	5.2	5.0	3.3
Radium 226 precision (±)	pCi/L	1.1	1.1	0.41	0.34
Radium 226 MDC	pCi/L	0.14	0.14	0.16	0.13
Radium 228	pCi/L	6.4	8.9	11	5.4
Radium 228 precision (±)	pCi/L	1.6	1.8	1.8	0.72
Radium 228 MDC	pCi/L	1.4	1.2	2.2	0.80
Thorium 230	pCi/L	0.02	0.09	0.02	0.04
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.1	0.08
Thorium 230 MDC	pCi/L	0.6	0.3	0.3	0.2
A/C Balance (± 5)	%	-1.04	-0.87	-2.58	-2.47
Anions	meq/L	71.7	70.7	71.5	69.8
Cations	meq/L	70.2	69.5	67.9	66.4
Solids, Total Dissolved Calculated	mg/L	4500	4400	4400	4300
TDS Balance (0.80 - 1.20)		1.10	1.08	1.08	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-001
Client Sample ID: 613

Report Date: 02/27/15
Collection Date: 01/12/15 09:30
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 19:04 / wc
Calcium	430	mg/L		1		E200.7	01/21/15 18:33 / sf
Chloride	138	mg/L	D	5		E300.0	01/22/15 17:20 / wc
Magnesium	707	mg/L		1		E200.7	01/21/15 18:33 / sf
Nitrogen, Ammonia as N	163	mg/L	D	5		A4500-NH3 G	01/21/15 13:02 / lr
Nitrogen, Nitrate+Nitrite as N	3.3	mg/L	D	0.5		E353.2	01/16/15 15:06 / lr
Potassium	ND	mg/L		1		E200.7	01/21/15 18:33 / sf
Sodium	238	mg/L		1		E200.7	01/21/15 18:33 / sf
Sulfate	8820	mg/L	D	20		E300.0	01/22/15 17:20 / wc
PHYSICAL PROPERTIES							
pH	3.00	s.u.	H	0.01		A4500-H B	01/19/15 11:23 / alp
Solids, Total Dissolved TDS @ 180 C	11800	mg/L		100		A2540 C	01/19/15 08:46 / alp
METALS - TOTAL							
Aluminum	583	mg/L	D	0.2		E200.7	01/21/15 16:22 / sf
Beryllium	0.150	mg/L		0.001		E200.8	01/21/15 15:47 / clm
Cadmium	0.047	mg/L		0.005		E200.8	01/21/15 15:47 / clm
Cobalt	1.80	mg/L		0.01		E200.8	01/21/15 15:47 / clm
Lead	0.007	mg/L		0.001		E200.8	01/21/15 15:47 / clm
Manganese	49.7	mg/L		0.01		E200.7	01/21/15 16:22 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 16:22 / sf
Nickel	1.80	mg/L		0.05		E200.8	01/21/15 15:47 / clm
Uranium	0.900	mg/L		0.0003		E200.8	01/21/15 15:47 / clm
Vanadium	1.5	mg/L		0.1		E200.7	01/21/15 16:22 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/15 13:40 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:17 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	98.0	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U Precision (±)	19.1	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U MDC	1.0	pCi/L				E900.1	01/23/15 11:12 / dmf
Lead 210	1.3	pCi/L				E909.0	02/06/15 17:17 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	02/06/15 17:17 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/06/15 17:17 / eli-cs
Radium 226	12	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	2.4	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.18	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	3.6	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	0.96	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-001
Client Sample ID: 613

Report Date: 02/27/15
Collection Date: 01/12/15 09:30
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	608	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 precision (±)	116	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 MDC	7.2	pCi/L				E908.0	01/26/15 13:25 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-4.54	%				A1030 E	01/30/15 10:49 / kbh
Anions	196	meq/L				A1030 E	01/30/15 10:49 / kbh
Cations	179	meq/L				A1030 E	01/30/15 10:49 / kbh
Solids, Total Dissolved Calculated	10000	mg/L				A1030 E	01/30/15 10:49 / kbh
TDS Balance (0.80 - 1.20)	1.13					A1030 E	01/30/15 10:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 16:57 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 16:57 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 16:57 / jlr
Chloroform	71.6	ug/L		5.0		E624	01/20/15 17:17 / jlr
Trihalomethanes, Total	71.6	ug/L		0.50		E624	01/16/15 16:57 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	01/16/15 16:57 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	01/16/15 16:57 / jlr
Surr: p-Bromofluorobenzene	103	%REC		67.1-133		E624	01/16/15 16:57 / jlr
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	01/16/15 16:57 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-001
Client Sample ID: 613

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 08:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L	H	5		A2320 B	04/28/15 15:42 / wc
Calcium	418	mg/L		1		E200.7	04/21/15 15:56 / sf
Chloride	134	mg/L	D	5		E300.0	04/27/15 16:50 / wc
Magnesium	705	mg/L		1		E200.7	04/21/15 15:56 / sf
Nitrogen, Ammonia as N	164	mg/L	D	5		A4500-NH3 G	04/21/15 13:35 / lr
Nitrogen, Nitrate+Nitrite as N	1.2	mg/L	D	0.2		E353.2	04/20/15 14:08 / lr
Potassium	1	mg/L		1		E200.7	04/22/15 15:21 / sf
Sodium	237	mg/L		1		E200.7	04/21/15 15:56 / sf
Sulfate	8910	mg/L	D	20		E300.0	04/27/15 16:50 / wc
PHYSICAL PROPERTIES							
pH	2.97	s.u.	H	0.01		A4500-H B	04/24/15 09:27 / lmc
Solids, Total Dissolved TDS @ 180 C	11400	mg/L	H	100		A2540 C	04/24/15 10:31 / lmc
METALS - TOTAL							
Aluminum	581	mg/L		0.1		E200.7	04/21/15 18:06 / sf
Beryllium	0.165	mg/L		0.001		E200.7	04/21/15 18:06 / sf
Cadmium	0.033	mg/L		0.005		E200.8	04/23/15 03:05 / clm
Cobalt	1.70	mg/L		0.01		E200.8	04/28/15 18:36 / clm
Lead	0.009	mg/L		0.001		E200.8	04/23/15 03:05 / clm
Manganese	47.4	mg/L		0.01		E200.7	04/21/15 18:06 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:06 / sf
Nickel	1.75	mg/L		0.05		E200.7	04/21/15 18:06 / sf
Uranium	0.801	mg/L		0.0003		E200.8	04/28/15 18:36 / clm
Vanadium	1.4	mg/L		0.1		E200.7	04/21/15 18:06 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.005		E1632AM	04/28/15 20:47 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 10:55 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	127	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U Precision (±)	24.8	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U MDC	1.2	pCi/L				E900.1	04/22/15 11:52 / plj
Lead 210	1.5	pCi/L				E909.0	05/01/15 04:31 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 04:31 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 04:31 / eli-cs
Radium 226	11	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 precision (±)	2.2	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 MDC	0.17	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 228	0.92	pCi/L	U			RA-05	04/28/15 12:27 / plj
Radium 228 precision (±)	0.89	pCi/L				RA-05	04/28/15 12:27 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 12:27 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-001
Client Sample ID: 613

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 08:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	583	pCi/L				E908.0	05/11/15 17:38 / cng
Thorium 230 precision (±)	111	pCi/L				E908.0	05/11/15 17:38 / cng
Thorium 230 MDC	12.1	pCi/L				E908.0	05/11/15 17:38 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-4.24	%				A1030 E	05/04/15 09:57 / kbh
Anions	190	meq/L				A1030 E	05/04/15 09:57 / kbh
Cations	175	meq/L				A1030 E	05/04/15 09:57 / kbh
Solids, Total Dissolved Calculated	11000	mg/L				A1030 E	05/04/15 09:57 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	05/04/15 09:57 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 13:56 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 13:56 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 13:56 / jlr
Chloroform	77.6	ug/L		5.0		E624	04/20/15 19:10 / jlr
Trihalomethanes, Total	77.6	ug/L		0.50		E624	04/20/15 13:56 / jlr
Surr: 1,2-Dichlorobenzene-d4	99.0	%REC		73.7-126		E624	04/20/15 13:56 / jlr
Surr: Dibromofluoromethane	105	%REC		64.4-131		E624	04/20/15 13:56 / jlr
Surr: p-Bromofluorobenzene	92.0	%REC		67.1-133		E624	04/20/15 13:56 / jlr
Surr: Toluene-d8	94.0	%REC		79.7-125		E624	04/20/15 13:56 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		613	613	613	613
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-001	C15010404-001	C14100756-001	C14070667-008
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	418	430	430	422
Chloride	mg/L	134	138	137	132
Magnesium	mg/L	705	707	704	693
Nitrogen, Ammonia as N	mg/L	164	163	176	180
Nitrogen, Nitrate+Nitrite as N	mg/L	1.2	3.3	2.8	2.9
Potassium	mg/L	1	ND(1)	ND(1)	ND(1)
Sodium	mg/L	237	238	242	243
Sulfate	mg/L	8910	8820	8810	9060
pH	s.u.	2.97	3.00	2.99	3.00
Solids, Total Dissolved TDS @ 180 C	mg/L	11400	11800	11800	11300
Aluminum	mg/L	581	583	560	590
Beryllium	mg/L	0.165	0.150	0.165	0.171
Cadmium	mg/L	0.033	0.047	0.040	0.047
Cobalt	mg/L	1.70	1.80	1.79	1.80
Lead	mg/L	0.009	0.007	0.026	0.004
Manganese	mg/L	47.4	49.7	47.0	49.7
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	1.75	1.80	1.78	1.78
Uranium	mg/L	0.801	0.900	0.902	0.893
Vanadium	mg/L	1.4	1.5	0.9	1.4
Arsenic-III	mg/L	ND(0.005)	ND(0.001)	0.002	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	127 *	98.0 *	25.5	23.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	24.8	19.1	1.5	1.6
Gross Alpha minus Rn & U MDC	pCi/L	1.2	1.0	0.4	0.5
Lead 210	pCi/L	1.5	1.3	1.5	1.0
Lead 210 precision (±)	pCi/L	0.8	0.7	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	11	12	8.5	7.6
Radium 226 precision (±)	pCi/L	2.2	2.4	0.58	0.53
Radium 226 MDC	pCi/L	0.17	0.18	0.19	0.14
Radium 228	pCi/L	0.92	3.6	0.75	0.39
Radium 228 precision (±)	pCi/L	0.89	0.96	1.4	0.54
Radium 228 MDC	pCi/L	1.4	1.5	2.2	0.87
Thorium 230	pCi/L	583	608	698	749
Thorium 230 precision (±)	pCi/L	111	116	99.1	122
Thorium 230 MDC	pCi/L	12.1	7.2	11.9	12.1
A/C Balance (± 5)	%	-4.24	-4.54	-3.22	-3.75
Anions	meq/L	190	196	188	193
Cations	meq/L	175	179	177	179
Solids, Total Dissolved Calculated	mg/L	11000	10000	10000	11000
TDS Balance (0.80 - 1.20)		1.08	1.13	1.12	1.08
Trihalomethanes, Total	ug/L	77.6	71.6	66.4	116

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-003
Client Sample ID: 708

Report Date: 02/27/15
Collection Date: 01/12/15 11:35
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 19:10 / wc
Calcium	439	mg/L		1		E200.7	01/21/15 18:41 / sf
Chloride	29	mg/L	D	2		E300.0	01/20/15 10:07 / wc
Magnesium	581	mg/L		1		E200.7	01/21/15 18:41 / sf
Nitrogen, Ammonia as N	1.26	mg/L		0.05		A4500-NH3 G	01/21/15 12:12 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:11 / lr
Potassium	4	mg/L		1		E200.7	01/21/15 18:41 / sf
Sodium	120	mg/L		1		E200.7	01/21/15 18:41 / sf
Sulfate	4370	mg/L	D	8		E300.0	01/20/15 10:07 / wc
PHYSICAL PROPERTIES							
pH	2.95	s.u.	H	0.01		A4500-H B	01/19/15 11:29 / alp
Solids, Total Dissolved TDS @ 180 C	6310	mg/L		100		A2540 C	01/19/15 08:47 / alp
METALS - TOTAL							
Aluminum	52.7	mg/L		0.1		E200.7	01/21/15 16:29 / sf
Beryllium	0.060	mg/L		0.001		E200.7	01/21/15 16:29 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 15:54 / clm
Cobalt	0.56	mg/L		0.01		E200.8	01/21/15 15:54 / clm
Lead	0.004	mg/L		0.001		E200.8	01/21/15 15:54 / clm
Manganese	13.6	mg/L		0.01		E200.7	01/21/15 16:29 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 16:29 / sf
Nickel	0.63	mg/L		0.05		E200.8	01/21/15 15:54 / clm
Uranium	0.135	mg/L		0.0003		E200.8	01/21/15 15:54 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:29 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/15 14:04 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:20 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	35.1	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U Precision (±)	7.3	pCi/L				E900.1	01/23/15 11:12 / dmf
Gross Alpha minus Rn & U MDC	1.0	pCi/L				E900.1	01/23/15 11:12 / dmf
Lead 210	0.5	pCi/L	U			E909.0	02/06/15 20:42 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/06/15 20:42 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/06/15 20:42 / eli-cs
Radium 226	10	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	2.0	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	4.8	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	1.2	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-003
Client Sample ID: 708

Report Date: 02/27/15
Collection Date: 01/12/15 11:35
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.4	pCi/L	U			E908.0	02/18/15 13:16 / dmf
Thorium 230 precision (±)	0.3	pCi/L				E908.0	02/18/15 13:16 / dmf
Thorium 230 MDC	0.5	pCi/L				E908.0	02/18/15 13:16 / dmf
- See Case Narrative regarding Th230 analysis.							
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.04	%				A1030 E	01/26/15 09:04 / kbh
Anions	92.4	meq/L				A1030 E	01/26/15 09:04 / kbh
Cations	92.4	meq/L				A1030 E	01/26/15 09:04 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	01/26/15 09:04 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	01/26/15 09:04 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 18:07 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 18:07 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 18:07 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 18:07 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 18:07 / jlr
Surr: 1,2-Dichlorobenzene-d4	115	%REC		73.7-126		E624	01/16/15 18:07 / jlr
Surr: Dibromofluoromethane	95.0	%REC		64.4-131		E624	01/16/15 18:07 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/16/15 18:07 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	01/16/15 18:07 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 3.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-003
Client Sample ID: 708

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 10:55
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 16:24 / wc
Calcium	425	mg/L		1		E200.7	04/22/15 15:29 / sf
Chloride	30	mg/L		1		E300.0	04/21/15 20:14 / wc
Magnesium	546	mg/L		1		E200.7	04/22/15 15:29 / sf
Nitrogen, Ammonia as N	1.44	mg/L		0.05		A4500-NH3 G	04/21/15 12:48 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:23 / lr
Potassium	2	mg/L		1		E200.7	04/22/15 15:29 / sf
Sodium	117	mg/L		1		E200.7	04/22/15 15:29 / sf
Sulfate	4710	mg/L	D	8		E300.0	04/27/15 17:09 / wc
PHYSICAL PROPERTIES							
pH	3.05	s.u.	H	0.01		A4500-H B	04/24/15 09:33 / lmc
Solids, Total Dissolved TDS @ 180 C	6470	mg/L		40		A2540 C	04/20/15 09:44 / lmc
METALS - TOTAL							
Aluminum	64.1	mg/L		0.1		E200.7	04/21/15 18:22 / sf
Beryllium	0.060	mg/L		0.001		E200.7	04/21/15 18:22 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 18:22 / sf
Cobalt	0.50	mg/L		0.01		E200.8	04/21/15 23:49 / clm
Lead	0.002	mg/L		0.001		E200.8	04/21/15 23:49 / clm
Manganese	12.4	mg/L		0.01		E200.7	04/21/15 18:22 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:22 / sf
Nickel	0.61	mg/L		0.05		E200.7	04/21/15 18:22 / sf
Uranium	0.155	mg/L		0.0003		E200.8	04/21/15 23:49 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:22 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 21:11 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:02 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	44.9	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U Precision (±)	9.3	pCi/L				E900.1	04/22/15 11:52 / plj
Gross Alpha minus Rn & U MDC	1.2	pCi/L				E900.1	04/22/15 11:52 / plj
Lead 210	1	pCi/L	U			E909.0	05/01/15 07:56 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 07:56 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 07:56 / eli-cs
Radium 226	6.8	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 precision (±)	1.3	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 228	4.5	pCi/L				RA-05	04/28/15 12:27 / plj
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/28/15 12:27 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/28/15 12:27 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-003
Client Sample ID: 708

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 10:55
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.4	pCi/L	U			E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	0.8	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	1.7	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-5.87	%				A1030 E	05/20/15 12:24 / sdw
Anions	99.5	meq/L				A1030 E	05/20/15 12:24 / sdw
Cations	88.4	meq/L				A1030 E	05/20/15 12:24 / sdw
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	05/20/15 12:24 / sdw
TDS Balance (0.80 - 1.20)	1.10					A1030 E	05/20/15 12:24 / sdw
- The Anion / Cation balance was confirmed by re-analysis.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 15:06 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 15:06 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 15:06 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 15:06 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 15:06 / jlr
Surr: 1,2-Dichlorobenzene-d4	113	%REC		73.7-126		E624	04/20/15 15:06 / jlr
Surr: Dibromofluoromethane	106	%REC		64.4-131		E624	04/20/15 15:06 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/20/15 15:06 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	04/20/15 15:06 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 3.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		708	708	708	708
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-003	C15010404-003	C14100756-003	C14070667-009
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	425	439	432	421
Chloride	mg/L	30	29	31	29
Magnesium	mg/L	546	581	538	564
Nitrogen, Ammonia as N	mg/L	1.44	1.26	1.48	1.41
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	0.1
Potassium	mg/L	2	4	1	7
Sodium	mg/L	117	120	116	122
Sulfate	mg/L	4710	4370	4430	4530
pH	s.u.	3.05	2.95	2.93	3.15
Solids, Total Dissolved TDS @ 180 C	mg/L	6470	6310	6240	6350
Aluminum	mg/L	64.1	52.7	49.5	54.6
Beryllium	mg/L	0.060	0.060	0.058	0.056
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.50	0.56	0.55	0.54
Lead	mg/L	0.002	0.004	0.003	0.004
Manganese	mg/L	12.4	13.6	13.2	13.2
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.61	0.63	0.65	0.66
Uranium	mg/L	0.155	0.135	0.118	0.132
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	0.002	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	44.9 *	35.1 *	11.7	10.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	9.3	7.3	1.1	1.1
Gross Alpha minus Rn & U MDC	pCi/L	1.2	1.0	0.4	0.5
Lead 210	pCi/L	1	0.5	1.3	1.8
Lead 210 precision (±)	pCi/L	0.8	0.6	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	6.8	10	8.3	6.9
Radium 226 precision (±)	pCi/L	1.3	2.0	0.52	0.48
Radium 226 MDC	pCi/L	0.14	0.16	0.16	0.13
Radium 228	pCi/L	4.5	4.8	5.5	3.1
Radium 228 precision (±)	pCi/L	1.3	1.2	1.4	0.62
Radium 228 MDC	pCi/L	1.1	1.4	1.8	0.79
Thorium 230	pCi/L	0.4	0.4	0.7	0.4
Thorium 230 precision (±)	pCi/L	0.8	0.3	0.7	0.3
Thorium 230 MDC	pCi/L	1.7	0.5	1.1	0.4
A/C Balance (± 5)	%	-5.87	-0.04	-3.63	-2.61
Anions	meq/L	99.5	92.4	93.7	95.6
Cations	meq/L	88.4	92.4	87.1	90.8
Solids, Total Dissolved Calculated	mg/L	5900	5600	5600	5700
TDS Balance (0.80 - 1.20)		1.10	1.12	1.11	1.12
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-005
Client Sample ID: EPA-13

Report Date: 02/27/15
Collection Date: 01/12/15 13:36
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	51	mg/L		5		A2320 B	01/19/15 19:20 / wc
Calcium	454	mg/L		1		E200.7	01/28/15 17:34 / sf
Chloride	47	mg/L	D	5		E300.0	01/27/15 21:48 / wc
Magnesium	925	mg/L		1		E200.7	01/26/15 19:24 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 12:20 / lr
Nitrogen, Nitrate+Nitrite as N	0.1	mg/L		0.1		E353.2	01/16/15 15:26 / lr
Potassium	14	mg/L		1		E200.7	01/26/15 19:24 / sf
Sodium	168	mg/L		1		E200.7	01/26/15 19:24 / sf
Sulfate	5070	mg/L	D	20		E300.0	01/27/15 21:48 / wc
PHYSICAL PROPERTIES							
pH	6.25	s.u.	H	0.01		A4500-H B	01/19/15 12:39 / alp
Solids, Total Dissolved TDS @ 180 C	7220	mg/L		100		A2540 C	01/19/15 08:47 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/21/15 16:48 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/21/15 16:48 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 16:15 / clm
Cobalt	0.11	mg/L		0.01		E200.8	01/21/15 16:15 / clm
Lead	ND	mg/L		0.001		E200.8	01/21/15 16:15 / clm
Manganese	6.88	mg/L		0.01		E200.7	01/21/15 16:48 / sf
Molybdenum	0.2	mg/L		0.1		E200.7	01/21/15 16:48 / sf
Nickel	0.29	mg/L		0.05		E200.8	01/21/15 16:15 / clm
Uranium	0.0084	mg/L		0.0003		E200.8	01/21/15 16:15 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:48 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/23/15 14:28 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:30 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	17.7	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	4.0	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	0.4	pCi/L	U			E909.0	02/07/15 00:06 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 00:06 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 00:06 / eli-cs
Radium 226	6.4	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	1.3	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	7.7	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	1.6	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-005
Client Sample ID: EPA-13

Report Date: 02/27/15
Collection Date: 01/12/15 13:36
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L	U			E908.0	02/02/15 09:59 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	02/02/15 09:59 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	02/02/15 09:59 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.64	%				A1030 E	01/30/15 10:35 / kbh
Anions	108	meq/L				A1030 E	01/30/15 10:35 / kbh
Cations	106	meq/L				A1030 E	01/30/15 10:35 / kbh
Solids, Total Dissolved Calculated	6700	mg/L				A1030 E	01/30/15 10:35 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	01/30/15 10:35 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 19:17 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 19:17 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 19:17 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 19:17 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 19:17 / jlr
Surr: 1,2-Dichlorobenzene-d4	119	%REC		73.7-126		E624	01/16/15 19:17 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/16/15 19:17 / jlr
Surr: p-Bromofluorobenzene	122	%REC		67.1-133		E624	01/16/15 19:17 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	01/16/15 19:17 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-005
Client Sample ID: EPA-13

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 13:10
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	60	mg/L		5		A2320 B	04/20/15 16:34 / wc
Calcium	454	mg/L		1		E200.7	04/21/15 16:20 / sf
Chloride	46	mg/L	D	2		E300.0	04/21/15 20:49 / wc
Magnesium	941	mg/L		1		E200.7	04/21/15 16:20 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/21/15 12:52 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:33 / lr
Potassium	14	mg/L		1		E200.7	04/22/15 15:56 / sf
Sodium	173	mg/L		1		E200.7	04/21/15 16:20 / sf
Sulfate	5180	mg/L	D	8		E300.0	04/21/15 20:49 / wc
PHYSICAL PROPERTIES							
pH	6.26	s.u.	H	0.01		A4500-H B	04/24/15 09:41 / lmc
Solids, Total Dissolved TDS @ 180 C	7330	mg/L		100		A2540 C	04/20/15 09:45 / lmc
METALS - TOTAL							
Aluminum	0.2	mg/L		0.1		E200.7	04/21/15 18:31 / sf
Beryllium	0.002	mg/L		0.001		E200.7	04/21/15 18:31 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/21/15 23:55 / clm
Cobalt	0.11	mg/L		0.01		E200.8	04/21/15 23:55 / clm
Lead	ND	mg/L		0.001		E200.8	04/21/15 23:55 / clm
Manganese	6.62	mg/L		0.01		E200.7	04/21/15 18:31 / sf
Molybdenum	0.2	mg/L		0.1		E200.7	04/21/15 18:31 / sf
Nickel	0.26	mg/L		0.05		E200.7	04/21/15 18:31 / sf
Uranium	0.0100	mg/L		0.0003		E200.8	04/21/15 23:55 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:31 / sf
METALS - SPECIATED							
Arsenic-III	0.029	mg/L		0.001		E1632AM	05/01/15 13:27 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:05 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	27.4	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	6.0	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	0.5	pCi/L	U			E909.0	05/01/15 11:22 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 11:22 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 11:22 / eli-cs
Radium 226	5.4	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 precision (±)	1.1	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 226 MDC	0.15	pCi/L				E903.0	05/04/15 08:12 / dmf
Radium 228	7.8	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	1.7	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-005
Client Sample ID: EPA-13

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 13:10
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L	U			E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	0.2	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	0.5	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.06	%				A1030 E	04/24/15 10:55 / kbh
Anions	110	meq/L				A1030 E	04/24/15 10:55 / kbh
Cations	108	meq/L				A1030 E	04/24/15 10:55 / kbh
Solids, Total Dissolved Calculated	6900	mg/L				A1030 E	04/24/15 10:55 / kbh
TDS Balance (0.80 - 1.20)	1.07					A1030 E	04/24/15 10:55 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 16:15 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 16:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 16:15 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 16:15 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 16:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	113	%REC		73.7-126		E624	04/20/15 16:15 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	04/20/15 16:15 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/20/15 16:15 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/20/15 16:15 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		EPA-13	EPA-13	EPA-13	EPA-13
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-005	C15010404-005	C14100756-005	C14070667-001
Bicarbonate as HCO3	mg/L	60	51	54	69
Calcium	mg/L	454	454	458	472
Chloride	mg/L	46	47	45	43
Magnesium	mg/L	941	925	920	914
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.14
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	0.1	0.1	ND(0.1)
Potassium	mg/L	14	14	14	14
Sodium	mg/L	173	168	168	172
Sulfate	mg/L	5180	5070	5030	5010
pH	s.u.	6.26	6.25	6.28	6.30
Solids, Total Dissolved TDS @ 180 C	mg/L	7330	7220	7540	6890
Aluminum	mg/L	0.2	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	0.002	ND(0.001)	ND(0.001)	0.002
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.11	0.11	0.09	0.10
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	6.62	6.88	6.63	6.90
Molybdenum	mg/L	0.2	0.2	0.2	0.2
Nickel	mg/L	0.26	0.29	0.25	0.25
Uranium	mg/L	0.0100	0.0084	0.0091	0.0167
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	0.029	ND(0.001)	ND(0.001)	0.006
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	27.4 *	17.7 *	8.0	5.9
Gross Alpha minus Rn & U Precision (±)	pCi/L	6.0	4.0	0.9	0.9
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	0.5	0.4	1.2	0.1
Lead 210 precision (±)	pCi/L	0.8	0.6	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	5.4	6.4	6.6	4.4
Radium 226 precision (±)	pCi/L	1.1	1.3	0.53	0.40
Radium 226 MDC	pCi/L	0.15	0.17	0.20	0.14
Radium 228	pCi/L	7.8	7.7	18	5.9
Radium 228 precision (±)	pCi/L	1.7	1.6	2.5	0.76
Radium 228 MDC	pCi/L	1.4	1.5	2.8	0.85
Thorium 230	pCi/L	0.1	0.2	0.1	0.4
Thorium 230 precision (±)	pCi/L	0.2	0.1	0.3	0.2
Thorium 230 MDC	pCi/L	0.5	0.2	0.5	0.2
A/C Balance (± 5)	%	-1.06	-0.64	-0.34	0.02
Anions	meq/L	110	108	107	107
Cations	meq/L	108	106	106	107
Solids, Total Dissolved Calculated	mg/L	6900	6700	6700	6700
TDS Balance (0.80 - 1.20)		1.07	1.07	1.13	1.03
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-009
Client Sample ID: 717

Report Date: 02/27/15
Collection Date: 01/13/15 08:50
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 20:22 / wc
Calcium	463	mg/L		1		E200.7	01/21/15 19:15 / sf
Chloride	64	mg/L	D	2		E300.0	01/20/15 13:01 / wc
Magnesium	498	mg/L		1		E200.7	01/21/15 19:15 / sf
Nitrogen, Ammonia as N	68	mg/L	D	5		A4500-NH3 G	01/21/15 13:17 / lr
Nitrogen, Nitrate+Nitrite as N	27	mg/L	D	2		E353.2	01/16/15 15:37 / lr
Potassium	9	mg/L		1		E200.7	01/21/15 19:15 / sf
Sodium	170	mg/L		1		E200.7	01/21/15 19:15 / sf
Sulfate	4530	mg/L	D	8		E300.0	01/20/15 13:01 / wc
PHYSICAL PROPERTIES							
pH	3.55	s.u.	H	0.01		A4500-H B	01/19/15 12:51 / alp
Solids, Total Dissolved TDS @ 180 C	6470	mg/L		100		A2540 C	01/19/15 08:48 / alp
METALS - TOTAL							
Aluminum	175	mg/L		0.1		E200.7	01/21/15 17:04 / sf
Beryllium	0.131	mg/L		0.001		E200.7	01/21/15 17:04 / sf
Cadmium	0.022	mg/L		0.005		E200.8	01/21/15 16:28 / clm
Cobalt	0.96	mg/L		0.01		E200.8	01/21/15 16:28 / clm
Lead	0.030	mg/L		0.001		E200.8	01/21/15 16:28 / clm
Manganese	19.2	mg/L		0.01		E200.7	01/21/15 17:04 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 17:04 / sf
Nickel	0.94	mg/L		0.05		E200.8	01/21/15 16:28 / clm
Uranium	0.127	mg/L		0.0003		E200.8	01/21/15 16:28 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 17:04 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 16:19 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:43 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	159	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	30.6	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	2.7	pCi/L				E909.0	02/07/15 06:55 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/07/15 06:55 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 06:55 / eli-cs
Radium 226	29	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	5.4	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.17	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	17	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	3.1	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.5	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-009
Client Sample ID: 717

Report Date: 02/27/15
Collection Date: 01/13/15 08:50
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	7.3	pCi/L				E908.0	02/18/15 13:16 / dmf
Thorium 230 precision (±)	1.4	pCi/L				E908.0	02/18/15 13:16 / dmf
Thorium 230 MDC	0.7	pCi/L				E908.0	02/18/15 13:16 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.22	%				A1030 E	01/26/15 09:06 / kbh
Anions	98.6	meq/L				A1030 E	01/26/15 09:06 / kbh
Cations	99.0	meq/L				A1030 E	01/26/15 09:06 / kbh
Solids, Total Dissolved Calculated	5900	mg/L				A1030 E	01/26/15 09:06 / kbh
TDS Balance (0.80 - 1.20)	1.09					A1030 E	01/26/15 09:06 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/17/15 01:07 / jlr
Bromoform	ND	ug/L		0.50		E624	01/17/15 01:07 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/17/15 01:07 / jlr
Chloroform	1.59	ug/L		0.50		E624	01/17/15 01:07 / jlr
Trihalomethanes, Total	1.59	ug/L		0.50		E624	01/17/15 01:07 / jlr
Surr: 1,2-Dichlorobenzene-d4	122	%REC		73.7-126		E624	01/17/15 01:07 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/17/15 01:07 / jlr
Surr: p-Bromofluorobenzene	118	%REC		67.1-133		E624	01/17/15 01:07 / jlr
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	01/17/15 01:07 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-009
Client Sample ID: 717

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 11:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 17:00 / wc
Calcium	453	mg/L		1		E200.7	04/21/15 17:15 / sf
Chloride	66	mg/L	D	2		E300.0	04/21/15 23:26 / wc
Magnesium	487	mg/L		1		E200.7	04/21/15 17:15 / sf
Nitrogen, Ammonia as N	48	mg/L	D	1		A4500-NH3 G	04/21/15 13:30 / lr
Nitrogen, Nitrate+Nitrite as N	20	mg/L	D	1		E353.2	04/20/15 14:43 / lr
Potassium	7	mg/L		1		E200.7	04/22/15 16:12 / sf
Sodium	168	mg/L		1		E200.7	04/21/15 17:15 / sf
Sulfate	4590	mg/L	D	8		E300.0	04/21/15 23:26 / wc
PHYSICAL PROPERTIES							
pH	3.36	s.u.	H	0.01		A4500-H B	04/24/15 09:58 / lmc
Solids, Total Dissolved TDS @ 180 C	6680	mg/L		40		A2540 C	04/20/15 09:49 / lmc
METALS - TOTAL							
Aluminum	184	mg/L		0.1		E200.7	04/21/15 18:59 / sf
Beryllium	0.128	mg/L		0.001		E200.7	04/21/15 18:59 / sf
Cadmium	0.021	mg/L		0.005		E200.8	04/22/15 00:17 / clm
Cobalt	0.92	mg/L		0.01		E200.8	04/22/15 00:17 / clm
Lead	0.030	mg/L		0.001		E200.8	04/22/15 00:17 / clm
Manganese	18.5	mg/L		0.01		E200.7	04/21/15 18:59 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:59 / sf
Nickel	0.92	mg/L		0.05		E200.7	04/21/15 18:59 / sf
Uranium	0.185	mg/L		0.0003		E200.8	04/22/15 00:17 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:59 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/06/15 12:39 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:14 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	312	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	59.6	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	4.5	pCi/L				E909.0	05/05/15 09:46 / eli-cs
Lead 210 precision (±)	1.3	pCi/L				E909.0	05/05/15 09:46 / eli-cs
Lead 210 MDC	1.6	pCi/L				E909.0	05/05/15 09:46 / eli-cs
Radium 226	16	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	3.2	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	13	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	2.6	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-009
Client Sample ID: 717

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 11:40
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	6.4	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 precision (±)	1.2	pCi/L				E908.0	05/07/15 15:04 / cng
Thorium 230 MDC	1.1	pCi/L				E908.0	05/07/15 15:04 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.98	%				A1030 E	04/24/15 10:56 / kbh
Anions	101	meq/L				A1030 E	04/24/15 10:56 / kbh
Cations	98.7	meq/L				A1030 E	04/24/15 10:56 / kbh
Solids, Total Dissolved Calculated	6000	mg/L				A1030 E	04/24/15 10:56 / kbh
TDS Balance (0.80 - 1.20)	1.12					A1030 E	04/24/15 10:56 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 18:35 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 18:35 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 18:35 / jlr
Chloroform	3.54	ug/L		0.50		E624	04/20/15 18:35 / jlr
Trihalomethanes, Total	3.54	ug/L		0.50		E624	04/20/15 18:35 / jlr
Surr: 1,2-Dichlorobenzene-d4	114	%REC		73.7-126		E624	04/20/15 18:35 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/20/15 18:35 / jlr
Surr: p-Bromofluorobenzene	115	%REC		67.1-133		E624	04/20/15 18:35 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/20/15 18:35 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		717	717	717	717
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-009	C15010404-009	C14100818-005	C14070667-004
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	453	463	458	454
Chloride	mg/L	66	64	68	64
Magnesium	mg/L	487	498	492	502
Nitrogen, Ammonia as N	mg/L	48	68	52	54
Nitrogen, Nitrate+Nitrite as N	mg/L	20	27	26	30
Potassium	mg/L	7	9	8	10
Sodium	mg/L	168	170	165	174
Sulfate	mg/L	4590	4530	4630	4560
pH	s.u.	3.36	3.55	3.70	3.83
Solids, Total Dissolved TDS @ 180 C	mg/L	6680	6470	6470	6210
Aluminum	mg/L	184	175	171	160
Beryllium	mg/L	0.128	0.131	0.134	0.136
Cadmium	mg/L	0.021	0.022	0.020	0.018
Cobalt	mg/L	0.92	0.96	0.96	0.98
Lead	mg/L	0.030	0.030	0.019	0.016
Manganese	mg/L	18.5	19.2	19.3	19.9
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.92	0.94	0.94	0.94
Uranium	mg/L	0.185	0.127	0.120	0.0734
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	312 *	159 *	26.4	19.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	59.6	30.6	1.5	1.5
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	4.5	2.7	3.7	2.3
Lead 210 precision (±)	pCi/L	1.3	0.8	0.9	0.8
Lead 210 MDC	pCi/L	1.6	1.0	1.3	1.2
Radium 226	pCi/L	16	29	15	12
Radium 226 precision (±)	pCi/L	3.2	5.4	0.61	0.65
Radium 226 MDC	pCi/L	0.14	0.17	0.09	0.14
Radium 228	pCi/L	13	17	43	19
Radium 228 precision (±)	pCi/L	2.6	3.1	2.6	1.2
Radium 228 MDC	pCi/L	1.4	1.5	1.9	0.85
Thorium 230	pCi/L	6.4	7.3	5.6	0.9
Thorium 230 precision (±)	pCi/L	1.2	1.4	1.5	0.7
Thorium 230 MDC	pCi/L	1.1	0.7	0.9	1
A/C Balance (± 5)	%	-0.98	0.22	-4.80	-2.16
Anions	meq/L	101	98.6	101	99.1
Cations	meq/L	98.7	99.0	91.6	94.9
Solids, Total Dissolved Calculated	mg/L	6000	5900	6000	5900
TDS Balance (0.80 - 1.20)		1.12	1.09	1.07	1.05
Trihalomethanes, Total	ug/L	3.54	1.59	5.00	2.34

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-006
Client Sample ID: 719

Report Date: 02/27/15
Collection Date: 01/12/15 14:28
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 19:49 / wc
Calcium	470	mg/L		1		E200.7	01/21/15 19:04 / sf
Chloride	31	mg/L	D	2		E300.0	01/20/15 11:34 / wc
Magnesium	684	mg/L		1		E200.7	01/21/15 19:04 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 12:25 / lr
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	01/16/15 15:29 / lr
Potassium	12	mg/L		1		E200.7	01/21/15 19:04 / sf
Sodium	144	mg/L		1		E200.7	01/21/15 19:04 / sf
Sulfate	4290	mg/L	D	8		E300.0	01/20/15 11:34 / wc
PHYSICAL PROPERTIES							
pH	5.08	s.u.	H	0.01		A4500-H B	01/19/15 12:42 / alp
Solids, Total Dissolved TDS @ 180 C	5810	mg/L		100		A2540 C	01/19/15 08:48 / alp
METALS - TOTAL							
Aluminum	3.2	mg/L		0.1		E200.7	01/21/15 16:52 / sf
Beryllium	0.002	mg/L		0.001		E200.7	01/21/15 16:52 / sf
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 16:18 / clm
Cobalt	0.31	mg/L		0.01		E200.8	01/21/15 16:18 / clm
Lead	ND	mg/L		0.001		E200.8	01/21/15 16:18 / clm
Manganese	5.83	mg/L		0.01		E200.7	01/21/15 16:52 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 16:52 / sf
Nickel	0.42	mg/L		0.05		E200.8	01/21/15 16:18 / clm
Uranium	0.0382	mg/L		0.0003		E200.8	01/21/15 16:18 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 16:52 / sf
METALS - SPECIATED							
Arsenic-III	0.001	mg/L		0.001		E1632AM	01/26/15 15:18 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:35 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	15.3	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	3.5	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1.0	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	0.1	pCi/L	U			E909.0	02/07/15 01:48 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 01:48 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 01:48 / eli-cs
Radium 226	6.0	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	1.2	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	13	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	2.4	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-006
Client Sample ID: 719

Report Date: 02/27/15
Collection Date: 01/12/15 14:28
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/26/15 13:25 / dmf
Thorium 230 MDC	0.09	pCi/L				E908.0	01/26/15 13:25 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.15	%				A1030 E	01/26/15 09:05 / kbh
Anions	90.1	meq/L				A1030 E	01/26/15 09:05 / kbh
Cations	86.3	meq/L				A1030 E	01/26/15 09:05 / kbh
Solids, Total Dissolved Calculated	5600	mg/L				A1030 E	01/26/15 09:05 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/26/15 09:05 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/16/15 19:52 / jlr
Bromoform	ND	ug/L		0.50		E624	01/16/15 19:52 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/16/15 19:52 / jlr
Chloroform	ND	ug/L		0.50		E624	01/16/15 19:52 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/16/15 19:52 / jlr
Surr: 1,2-Dichlorobenzene-d4	123	%REC		73.7-126		E624	01/16/15 19:52 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	01/16/15 19:52 / jlr
Surr: p-Bromofluorobenzene	119	%REC		67.1-133		E624	01/16/15 19:52 / jlr
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	01/16/15 19:52 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-006
Client Sample ID: 719

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 14:05
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 16:39 / wc
Calcium	447	mg/L		1		E200.7	04/21/15 16:24 / sf
Chloride	32	mg/L		1		E300.0	04/21/15 21:06 / wc
Magnesium	674	mg/L		1		E200.7	04/21/15 16:24 / sf
Nitrogen, Ammonia as N	0.37	mg/L		0.05		A4500-NH3 G	04/21/15 12:59 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:36 / lr
Potassium	13	mg/L		1		E200.7	04/22/15 16:00 / sf
Sodium	142	mg/L		1		E200.7	04/21/15 16:24 / sf
Sulfate	4370	mg/L	D	8		E300.0	04/27/15 17:27 / wc
PHYSICAL PROPERTIES							
pH	4.64	s.u.	H	0.01		A4500-H B	04/24/15 09:46 / lmc
Solids, Total Dissolved TDS @ 180 C	6000	mg/L		40		A2540 C	04/20/15 09:48 / lmc
METALS - TOTAL							
Aluminum	2.7	mg/L		0.1		E200.7	04/21/15 18:35 / sf
Beryllium	0.002	mg/L		0.001		E200.7	04/21/15 18:35 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 18:35 / sf
Cobalt	0.26	mg/L		0.01		E200.8	04/21/15 23:59 / clm
Lead	0.001	mg/L		0.001		E200.8	04/21/15 23:59 / clm
Manganese	5.27	mg/L		0.01		E200.7	04/21/15 18:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 18:35 / sf
Nickel	0.35	mg/L		0.05		E200.7	04/21/15 18:35 / sf
Uranium	0.0356	mg/L		0.0003		E200.8	04/21/15 23:59 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 18:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/15 13:39 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:09 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	24.5	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	5.4	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	0.04	pCi/L	U			E909.0	05/01/15 13:05 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	05/01/15 13:05 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	05/01/15 13:05 / eli-cs
Radium 226	5.0	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	1.0	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.13	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	12	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	2.3	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-006
Client Sample ID: 719

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/13/15 14:05
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.7	pCi/L	U			E908.0	05/11/15 17:38 / cng
Thorium 230 precision (±)	0.8	pCi/L				E908.0	05/11/15 17:38 / cng
Thorium 230 MDC	1.3	pCi/L				E908.0	05/11/15 17:38 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Th230 analysis.							
DATA QUALITY							
A/C Balance (± 5)	-3.92	%				A1030 E	05/20/15 12:26 / sdw
Anions	91.9	meq/L				A1030 E	05/20/15 12:26 / sdw
Cations	85.0	meq/L				A1030 E	05/20/15 12:26 / sdw
Solids, Total Dissolved Calculated	5700	mg/L				A1030 E	05/20/15 12:26 / sdw
TDS Balance (0.80 - 1.20)	1.05					A1030 E	05/20/15 12:26 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 16:50 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 16:50 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 16:50 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 16:50 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 16:50 / jlr
Surr: 1,2-Dichlorobenzene-d4	112	%REC		73.7-126		E624	04/20/15 16:50 / jlr
Surr: Dibromofluoromethane	116	%REC		64.4-131		E624	04/20/15 16:50 / jlr
Surr: p-Bromofluorobenzene	111	%REC		67.1-133		E624	04/20/15 16:50 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/20/15 16:50 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		719	719	719	719
Collection Date:		4/13/2015	1/12/2015	10/13/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/16/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-006	C15010404-006	C14100756-006	C14070667-002
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	447	470	479	476
Chloride	mg/L	32	31	31	29
Magnesium	mg/L	674	684	687	690
Nitrogen, Ammonia as N	mg/L	0.37	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	0.4	0.4	0.4
Potassium	mg/L	13	12	13	14
Sodium	mg/L	142	144	144	149
Sulfate	mg/L	4370	4290	4170	4120
pH	s.u.	4.64	5.08	5.08	5.06
Solids, Total Dissolved TDS @ 180 C	mg/L	6000	5810	6060	5830
Aluminum	mg/L	2.7	3.2	3.2	2.0
Beryllium	mg/L	0.002	0.002	0.002	0.002
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.26	0.31	0.29	0.30
Lead	mg/L	0.001	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	5.27	5.83	5.60	5.78
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.35	0.42	0.37	0.40
Uranium	mg/L	0.0356	0.0382	0.0327	0.0255
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	0.001	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	24.5 *	15.3 *	7.9	6.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	5.4	3.5	0.9	0.9
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1.0	0.4	0.5
Lead 210	pCi/L	0.04	0.1	0.3	0.4
Lead 210 precision (±)	pCi/L	0.8	0.6	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.0	1.3	1.2
Radium 226	pCi/L	5.0	6.0	7.1	5.2
Radium 226 precision (±)	pCi/L	1.0	1.2	0.49	0.45
Radium 226 MDC	pCi/L	0.13	0.16	0.16	0.15
Radium 228	pCi/L	12	13	21	8.7
Radium 228 precision (±)	pCi/L	2.3	2.4	2.3	0.91
Radium 228 MDC	pCi/L	1.3	1.4	2.2	0.91
Thorium 230	pCi/L	0.7	0.2	0.4	0.3
Thorium 230 precision (±)	pCi/L	0.8	0.08	0.2	0.2
Thorium 230 MDC	pCi/L	1.3	0.09	0.2	0.2
A/C Balance (± 5)	%	-3.92	-2.15	-0.39	0.31
Anions	meq/L	91.9	90.1	87.7	86.8
Cations	meq/L	85.0	86.3	87.0	87.4
Solids, Total Dissolved Calculated	mg/L	5700	5600	5500	5500
TDS Balance (0.80 - 1.20)		1.05	1.03	1.09	1.06
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

SEMI-ANNUAL GROUND WATER MONITORING REPORT

SUPPLEMENTAL QUARTERLY/ MONTHLY SAMPLING

JANUARY TO JUNE OF 2015

ZONE-3

PB-3

PB-4

NBL-2

RW-A

NW-1

NW-2

NW-3

NW-4

NW-5

MW-6

MW-7

RW-11 (OCTOBER ONLY)

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-002
Client Sample ID: PB-3

Report Date: 02/27/15
Collection Date: 01/13/15 11:40
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 17:57 / wc
Chloride	25	mg/L	D	2		E300.0	01/20/15 01:37 / wc
PHYSICAL PROPERTIES							
pH	5.55	s.u.	H	0.01		A4500-H B	01/19/15 10:52 / alp
Solids, Total Dissolved TDS @ 180 C	4320	mg/L		50		A2540 C	01/19/15 08:43 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-015
Client Sample ID: PB-3

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 14:45
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	43	mg/L		5		A2320 B	04/20/15 17:40 / wc
Chloride	28	mg/L		1		E300.0	04/22/15 01:10 / wc
PHYSICAL PROPERTIES							
pH	6.70	s.u.	H	0.01		A4500-H B	04/20/15 14:43 / lmc
Solids, Total Dissolved TDS @ 180 C	4410	mg/L		20		A2540 C	04/20/15 09:55 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		PB-3	PB-3	PB-3	PB-3
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-015	C15010403-002	C14100822-002	C14070666-002
Bicarbonate as HCO3	mg/L	43	ND(5)	ND(5)	ND(5)
Chloride	mg/L	28	25	27	28
pH	s.u.	6.70	5.55	3.92	4.00
Solids, Total Dissolved TDS @ 180 C	mg/L	4410	4320	4560	4730

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-003
Client Sample ID: PB-4

Report Date: 02/27/15
Collection Date: 01/13/15 12:20
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 18:00 / wc
Chloride	26	mg/L	D	2		E300.0	01/20/15 01:55 / wc
PHYSICAL PROPERTIES							
pH	2.97	s.u.	H	0.01		A4500-H B	01/19/15 10:59 / alp
Solids, Total Dissolved TDS @ 180 C	4700	mg/L		50		A2540 C	01/19/15 08:44 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-016
Client Sample ID: PB-4

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 16:25
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 18:03 / wc
Chloride	31	mg/L		1		E300.0	04/22/15 01:28 / wc
PHYSICAL PROPERTIES							
pH	2.63	s.u.	H	0.01		A4500-H B	04/20/15 14:48 / lmc
Solids, Total Dissolved TDS @ 180 C	5010	mg/L		40		A2540 C	04/20/15 09:55 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		PB-4	PB-4	PB-4	PB-4
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-016	C15010403-003	C14100822-001	C14070666-003
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Chloride	mg/L	31	26	32	32
pH	s.u.	2.63	2.97	2.88	2.83
Solids, Total Dissolved TDS @ 180 C	mg/L	5010	4700	5440	5660

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-001
Client Sample ID: NBL-2

Report Date: 02/27/15
Collection Date: 01/13/15 10:05
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	345	mg/L		5		A2320 B	01/19/15 17:50 / wc
Chloride	40	mg/L		1		E300.0	01/20/15 01:20 / wc
PHYSICAL PROPERTIES							
pH	6.60	s.u.	H	0.01		A4500-H B	01/19/15 10:49 / alp
Solids, Total Dissolved TDS @ 180 C	3530	mg/L		40		A2540 C	01/19/15 08:42 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-014
Client Sample ID: NBL-2

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:50
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	337	mg/L		5		A2320 B	04/20/15 17:33 / wc
Chloride	41	mg/L		1		E300.0	04/22/15 00:53 / wc
PHYSICAL PROPERTIES							
pH	6.49	s.u.	H	0.01		A4500-H B	04/20/15 14:39 / lmc
Solids, Total Dissolved TDS @ 180 C	3490	mg/L		20		A2540 C	04/20/15 09:51 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NBL-2	NBL-2	NBL-2	NBL-2
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-014	C15010403-001	C14100818-001	C14070666-001
Bicarbonate as HCO3	mg/L	337	345	368	381
Calcium	mg/L			592	
Chloride	mg/L	41	40	44	48
Magnesium	mg/L			169	
Nitrogen, Ammonia as N	mg/L			ND(0.05)	
Nitrogen, Nitrate+Nitrite as N	mg/L			0.3	
Potassium	mg/L			7	
Sodium	mg/L			136	
Sulfate	mg/L			2210	
pH	s.u.	6.49	6.60	6.53	6.66
Solids, Total Dissolved TDS @ 180 C	mg/L	3490	3530	3520	3470
Aluminum	mg/L			ND(0.1)	
Beryllium	mg/L			ND(0.001)	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.03	
Lead	mg/L			0.003	
Manganese	mg/L			2.11	
Molybdenum	mg/L			ND(0.1)	
Nickel	mg/L			ND(0.05)	
Uranium	mg/L			0.111	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			5.1	
Gross Alpha minus Rn & U Precision (±)	pCi/L			0.7	
Gross Alpha minus Rn & U MDC	pCi/L			0.4	
Lead 210	pCi/L			-0.05	
Lead 210 precision (±)	pCi/L			0.8	
Lead 210 MDC	pCi/L			1.3	
Radium 226	pCi/L			4.9	
Radium 226 precision (±)	pCi/L			0.35	
Radium 226 MDC	pCi/L			0.09	
Radium 228	pCi/L			15	
Radium 228 precision (±)	pCi/L			1.7	
Radium 228 MDC	pCi/L			1.8	
Thorium 230	pCi/L			0.07	
Thorium 230 precision (±)	pCi/L			0.2	
Thorium 230 MDC	pCi/L			0.3	
A/C Balance (± 5)	%			-3.71	
Anions	meq/L			53.3	
Cations	meq/L			49.5	
Solids, Total Dissolved Calculated	mg/L			3400	
TDS Balance (0.80 - 1.20)				1.05	
Trihalomethanes, Total	ug/L			ND(0.50)	

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-010
Client Sample ID: RW-A

Report Date: 02/27/15
Collection Date: 01/13/15 11:40
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	169	mg/L		5		A2320 B	01/19/15 19:01 / wc
Chloride	31	mg/L	D	2		E300.0	01/20/15 09:14 / wc
PHYSICAL PROPERTIES							
pH	6.32	s.u.	H	0.01		A4500-H B	01/19/15 11:20 / alp
Solids, Total Dissolved TDS @ 180 C	4740	mg/L		30		A2540 C	01/19/15 08:46 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-023
Client Sample ID: RW-A

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 13:26
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	145	mg/L		5		A2320 B	04/20/15 19:08 / wc
Chloride	32	mg/L		1		E300.0	04/22/15 04:39 / wc
PHYSICAL PROPERTIES							
pH	6.22	s.u.	H	0.01		A4500-H B	04/20/15 15:36 / lmc
Solids, Total Dissolved TDS @ 180 C	4950	mg/L		20		A2540 C	04/20/15 09:58 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		RW-A	RW-A	RW-A	RW-A
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-023	C15010403-010	C14100818-003	C14070666-010
Bicarbonate as HCO3	mg/L	145	169	165	165
Calcium	mg/L			550	
Chloride	mg/L	32	31	36	32
Magnesium	mg/L			272	
Nitrogen, Ammonia as N	mg/L			2.79	
Nitrogen, Nitrate+Nitrite as N	mg/L			ND(0.1)	
Potassium	mg/L			9	
Sodium	mg/L			126	
Sulfate	mg/L			2660	
pH	s.u.	6.22	6.32	6.24	6.28
Solids, Total Dissolved TDS @ 180 C	mg/L	4950	4740	4010	4560
Aluminum	mg/L			7.8	
Beryllium	mg/L			0.007	
Cadmium	mg/L			ND(0.005)	
Cobalt	mg/L			0.27	
Lead	mg/L			0.011	
Manganese	mg/L			4.82	
Molybdenum	mg/L			0.3	
Nickel	mg/L			0.32	
Uranium	mg/L			0.138	
Vanadium	mg/L			ND(0.1)	
Arsenic-III	mg/L			ND(0.001)	
Selenium-IV	mg/L			ND(0.001)	
Gross Alpha minus Rn & U	pCi/L			20.8	
Gross Alpha minus Rn & U Precision (±)	pCi/L			1.3	
Gross Alpha minus Rn & U MDC	pCi/L			0.4	
Lead 210	pCi/L			2.3	
Lead 210 precision (±)	pCi/L			0.9	
Lead 210 MDC	pCi/L			1.3	
Radium 226	pCi/L			15	
Radium 226 precision (±)	pCi/L			0.62	
Radium 226 MDC	pCi/L			0.09	
Radium 228	pCi/L			32	
Radium 228 precision (±)	pCi/L			2.3	
Radium 228 MDC	pCi/L			1.8	
Thorium 230	pCi/L			5.2	
Thorium 230 precision (±)	pCi/L			0.9	
Thorium 230 MDC	pCi/L			0.2	
A/C Balance (± 5)	%			-3.14	
Anions	meq/L			59.1	
Cations	meq/L			55.5	
Solids, Total Dissolved Calculated	mg/L			3800	
TDS Balance (0.80 - 1.20)				1.07	
Trihalomethanes, Total	ug/L			ND(0.50)	

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-005
Client Sample ID: NW-1

Report Date: 02/27/15
Collection Date: 01/13/15 09:54
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	493	mg/L		5		A2320 B	01/19/15 18:16 / wc
Chloride	18	mg/L	D	2		E300.0	01/20/15 02:30 / wc
PHYSICAL PROPERTIES							
pH	6.98	s.u.	H	0.01		A4500-H B	01/19/15 11:05 / alp
Solids, Total Dissolved TDS @ 180 C	3830	mg/L		40		A2540 C	01/19/15 08:45 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-018
Client Sample ID: NW-1

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:00
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	477	mg/L		5		A2320 B	04/20/15 18:30 / wc
Chloride	20	mg/L		1		E300.0	04/22/15 02:37 / wc
PHYSICAL PROPERTIES							
pH	6.84	s.u.	H	0.01		A4500-H B	04/20/15 14:57 / lmc
Solids, Total Dissolved TDS @ 180 C	3940	mg/L		20		A2540 C	04/20/15 09:56 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-1	NW-1	NW-1	NW-1
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-018	C15010403-005	C14100822-003	C14070666-005
Bicarbonate as HCO3	mg/L	477	493	495	441
Chloride	mg/L	20	18	18	21
pH	s.u.	6.84	6.98	7.06	6.99
Solids, Total Dissolved TDS @ 180 C	mg/L	3940	3830	3910	3950

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-009
Client Sample ID: NW-2

Report Date: 02/27/15
Collection Date: 01/13/15 11:19
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	221	mg/L		5		A2320 B	01/19/15 18:53 / wc
Chloride	33	mg/L	D	2		E300.0	01/20/15 08:57 / wc
PHYSICAL PROPERTIES							
pH	6.39	s.u.	H	0.01		A4500-H B	01/19/15 11:17 / alp
Solids, Total Dissolved TDS @ 180 C	4750	mg/L		30		A2540 C	01/19/15 08:46 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-020
Client Sample ID: NW-2

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:36
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	173	mg/L		5		A2320 B	04/20/15 18:46 / wc
Chloride	33	mg/L		1		E300.0	04/22/15 03:47 / wc
PHYSICAL PROPERTIES							
pH	6.21	s.u.	H	0.01		A4500-H B	04/20/15 15:06 / lmc
Solids, Total Dissolved TDS @ 180 C	4840	mg/L		20		A2540 C	04/20/15 09:56 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-2	NW-2	NW-2	NW-2
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-020	C15010403-009	C14100822-007	C14070666-006
Bicarbonate as HCO3	mg/L	173	221	203	228
Chloride	mg/L	33	33	35	36
pH	s.u.	6.21	6.39	6.28	6.41
Solids, Total Dissolved TDS @ 180 C	mg/L	4840	4750	4670	4490

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-007
Client Sample ID: NW-3

Report Date: 02/27/15
Collection Date: 01/13/15 10:44
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	441	mg/L		5		A2320 B	01/19/15 18:38 / wc
Chloride	37	mg/L	D	2		E300.0	01/20/15 08:22 / wc
PHYSICAL PROPERTIES							
pH	6.79	s.u.	H	0.01		A4500-H B	01/19/15 11:11 / alp
Solids, Total Dissolved TDS @ 180 C	4150	mg/L		40		A2540 C	01/19/15 08:45 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-021
Client Sample ID: NW-3

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:53
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	417	mg/L		5		A2320 B	04/20/15 18:53 / wc
Chloride	38	mg/L		1		E300.0	04/22/15 04:04 / wc
PHYSICAL PROPERTIES							
pH	6.61	s.u.	H	0.01		A4500-H B	04/20/15 15:10 / lmc
Solids, Total Dissolved TDS @ 180 C	4300	mg/L		40		A2540 C	04/20/15 09:57 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-3	NW-3	NW-3	NW-3
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-021	C15010403-007	C14100822-005	C14070666-007
Bicarbonate as HCO3	mg/L	417	441	441	468
Chloride	mg/L	38	37	38	39
pH	s.u.	6.61	6.79	6.78	6.83
Solids, Total Dissolved TDS @ 180 C	mg/L	4300	4150	4070	3920

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-006
Client Sample ID: NW-4

Report Date: 02/27/15
Collection Date: 01/13/15 10:17
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	150	mg/L		5		A2320 B	01/19/15 18:24 / wc
Chloride	23	mg/L	D	2		E300.0	01/20/15 07:30 / wc
PHYSICAL PROPERTIES							
pH	6.96	s.u.	H	0.01		A4500-H B	01/19/15 11:08 / alp
Solids, Total Dissolved TDS @ 180 C	4490	mg/L		40		A2540 C	01/19/15 08:45 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-019
Client Sample ID: NW-4

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:15
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	150	mg/L		5		A2320 B	04/20/15 18:38 / wc
Chloride	23	mg/L		1		E300.0	04/22/15 03:29 / wc
PHYSICAL PROPERTIES							
pH	6.92	s.u.	H	0.01		A4500-H B	04/20/15 15:01 / lmc
Solids, Total Dissolved TDS @ 180 C	4680	mg/L		20		A2540 C	04/20/15 09:56 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-4	NW-4	NW-4	NW-4
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-019	C15010403-006	C14100822-004	C14070666-009
Bicarbonate as HCO3	mg/L	150	150	96	104
Chloride	mg/L	23	23	25	25
pH	s.u.	6.92	6.96	6.96	6.97
Solids, Total Dissolved TDS @ 180 C	mg/L	4680	4490	4530	4280

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-008
Client Sample ID: NW-5

Report Date: 02/27/15
Collection Date: 01/13/15 11:00
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	273	mg/L		5		A2320 B	01/19/15 18:46 / wc
Chloride	35	mg/L	DH	2		E300.0	02/27/15 13:10 / wc
- H-Original analysis was done within hold time. Data is from recheck analysis.							
PHYSICAL PROPERTIES							
pH	6.66	s.u.	H	0.01		A4500-H B	01/19/15 11:14 / alp
Solids, Total Dissolved TDS @ 180 C	5000	mg/L		40		A2540 C	01/19/15 08:46 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-022
Client Sample ID: NW-5

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 13:07
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	242	mg/L		5		A2320 B	04/20/15 19:01 / wc
Chloride	35	mg/L		1		E300.0	04/22/15 04:22 / wc
PHYSICAL PROPERTIES							
pH	6.49	s.u.	H	0.01		A4500-H B	04/20/15 15:26 / lmc
Solids, Total Dissolved TDS @ 180 C	5090	mg/L		20		A2540 C	04/20/15 09:58 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		NW-5	NW-5	NW-5	NW-5
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-022	C15010403-008	C14100822-006	C14070666-008
Bicarbonate as HCO3	mg/L	242	273	316	373
Chloride	mg/L	35	35	34	39
pH	s.u.	6.49	6.66	6.81	6.89
Solids, Total Dissolved TDS @ 180 C	mg/L	5090	5000	4840	4620

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010403-004
Client Sample ID: MW-6

Report Date: 02/27/15
Collection Date: 01/13/15 13:25
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	177	mg/L		5		A2320 B	01/19/15 18:07 / wc
Chloride	29	mg/L	D	2		E300.0	01/20/15 02:12 / wc
PHYSICAL PROPERTIES							
pH	7.48	s.u.	H	0.01		A4500-H B	01/19/15 11:02 / alp
Solids, Total Dissolved TDS @ 180 C	4770	mg/L		30		A2540 C	01/19/15 08:45 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-017
Client Sample ID: MW-6

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 17:35
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	185	mg/L		5		A2320 B	04/20/15 18:14 / wc
Chloride	31	mg/L		1		E300.0	04/22/15 01:45 / wc
PHYSICAL PROPERTIES							
pH	7.17	s.u.	H	0.01		A4500-H B	04/20/15 14:52 / lmc
Solids, Total Dissolved TDS @ 180 C	4690	mg/L		40		A2540 C	04/20/15 09:55 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		MW-6	MW-6	MW-6	MW-6
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040563-017	C15010403-004	C14100822-008	C14070666-004
Bicarbonate as HCO3	mg/L	185	177	194	142
Chloride	mg/L	31	29	31	27
pH	s.u.	7.17	7.48	7.41	7.41
Solids, Total Dissolved TDS @ 180 C	mg/L	4690	4770	5110	3810

****Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.**

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-011
Client Sample ID: MW-7

Report Date: 02/27/15
Collection Date: 01/13/15 10:30
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	388	mg/L		5		A2320 B	01/19/15 20:32 / wc
Calcium	638	mg/L		1		E200.7	01/21/15 19:31 / sf
Chloride	44	mg/L	D	2		E300.0	01/20/15 13:36 / wc
Magnesium	223	mg/L		1		E200.7	01/21/15 19:31 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 13:10 / lr
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	01/16/15 15:46 / lr
Potassium	8	mg/L		1		E200.7	01/21/15 19:31 / sf
Sodium	147	mg/L		1		E200.7	01/21/15 19:31 / sf
Sulfate	2510	mg/L	D	8		E300.0	01/20/15 13:36 / wc
PHYSICAL PROPERTIES							
pH	6.78	s.u.	H	0.01		A4500-H B	01/19/15 12:57 / alp
Solids, Total Dissolved TDS @ 180 C	3900	mg/L		50		A2540 C	01/19/15 08:54 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/21/15 17:19 / sf
Beryllium	ND	mg/L		0.001		E200.8	01/21/15 16:58 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/21/15 16:58 / clm
Cobalt	0.05	mg/L		0.01		E200.8	01/21/15 16:58 / clm
Lead	ND	mg/L		0.001		E200.8	01/21/15 16:58 / clm
Manganese	3.29	mg/L		0.01		E200.7	01/21/15 17:19 / sf
Molybdenum	0.6	mg/L		0.1		E200.7	01/21/15 17:19 / sf
Nickel	0.08	mg/L		0.05		E200.8	01/21/15 16:58 / clm
Uranium	0.140	mg/L		0.0003		E200.8	01/21/15 16:58 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 17:19 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 16:43 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:46 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	20.4	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	4.5	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	-0.3	pCi/L	U			E909.0	02/07/15 10:19 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 10:19 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 10:19 / eli-cs
Radium 226	10	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 226 precision (±)	2.0	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 228	12	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	2.4	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-011
Client Sample ID: MW-7

Report Date: 02/27/15
Collection Date: 01/13/15 10:30
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.1	pCi/L				E908.0	02/02/15 10:00 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	02/02/15 10:00 / dmf
Thorium 230 MDC	0.08	pCi/L				E908.0	02/02/15 10:00 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.71	%				A1030 E	01/26/15 09:06 / kbh
Anions	59.9	meq/L				A1030 E	01/26/15 09:06 / kbh
Cations	56.8	meq/L				A1030 E	01/26/15 09:06 / kbh
Solids, Total Dissolved Calculated	3800	mg/L				A1030 E	01/26/15 09:06 / kbh
TDS Balance (0.80 - 1.20)	1.03					A1030 E	01/26/15 09:06 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/17/15 02:17 / jlr
Bromoform	ND	ug/L		0.50		E624	01/17/15 02:17 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/17/15 02:17 / jlr
Chloroform	ND	ug/L		0.50		E624	01/17/15 02:17 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/17/15 02:17 / jlr
Surr: 1,2-Dichlorobenzene-d4	120	%REC		73.7-126		E624	01/17/15 02:17 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/17/15 02:17 / jlr
Surr: p-Bromofluorobenzene	122	%REC		67.1-133		E624	01/17/15 02:17 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	01/17/15 02:17 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - *Quality control limit.*
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - *Not detected at the reporting limit.*

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-011
Client Sample ID: MW-7

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 13:10
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	355	mg/L		5		A2320 B	04/20/15 17:11 / wc
Calcium	635	mg/L		1		E200.7	04/21/15 17:23 / sf
Chloride	42	mg/L		1		E300.0	04/22/15 00:00 / wc
Magnesium	229	mg/L		1		E200.7	04/21/15 17:23 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/21/15 13:33 / lr
Nitrogen, Nitrate+Nitrite as N	0.4	mg/L		0.1		E353.2	04/20/15 14:48 / lr
Potassium	8	mg/L		1		E200.7	04/22/15 16:20 / sf
Sodium	147	mg/L		1		E200.7	04/21/15 17:23 / sf
Sulfate	2400	mg/L	D	4		E300.0	04/22/15 00:00 / wc
PHYSICAL PROPERTIES							
pH	7.60	s.u.	H	0.01		A4500-H B	04/24/15 10:05 / lmc
Solids, Total Dissolved TDS @ 180 C	3950	mg/L		20		A2540 C	04/20/15 09:50 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/21/15 19:06 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/21/15 19:06 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 19:06 / sf
Cobalt	0.05	mg/L		0.01		E200.8	04/22/15 00:23 / clm
Lead	ND	mg/L		0.001		E200.8	04/22/15 00:23 / clm
Manganese	3.17	mg/L		0.01		E200.7	04/21/15 19:06 / sf
Molybdenum	0.5	mg/L		0.1		E200.7	04/21/15 19:06 / sf
Nickel	0.06	mg/L		0.05		E200.7	04/21/15 19:06 / sf
Uranium	0.120	mg/L		0.0003		E200.8	04/22/15 00:23 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 19:06 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/06/15 13:04 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:17 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	27.5	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	6.0	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	0.4	pCi/L	U			E909.0	05/05/15 15:28 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	05/05/15 15:28 / eli-cs
Lead 210 MDC	1.6	pCi/L				E909.0	05/05/15 15:28 / eli-cs
Radium 226	8.2	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	1.6	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.13	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	9.7	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	2.0	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-011
Client Sample ID: MW-7

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 13:10
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	05/08/15 09:59 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	05/08/15 09:59 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	05/08/15 09:59 / cng
- See Case Narrative regarding Alpha-U analysis.							
- See Case Narrative regarding Pb210 analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.10	%				A1030 E	05/20/15 12:27 / sdw
Anions	57.0	meq/L				A1030 E	05/20/15 12:27 / sdw
Cations	57.1	meq/L				A1030 E	05/20/15 12:27 / sdw
Solids, Total Dissolved Calculated	3600	mg/L				A1030 E	05/20/15 12:27 / sdw
TDS Balance (0.80 - 1.20)	1.08					A1030 E	05/20/15 12:27 / sdw
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 23:15 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 23:15 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 23:15 / jlr
Chloroform	ND	ug/L		0.50		E624	04/20/15 23:15 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/20/15 23:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	114	%REC		73.7-126		E624	04/20/15 23:15 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/20/15 23:15 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/20/15 23:15 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/20/15 23:15 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		MW-7	MW-7	MW-7	MW-7
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/15/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-011	C15010404-011	C14100818-002	C14070667-011
Bicarbonate as HCO3	mg/L	355	388	378	391
Calcium	mg/L	635	638	614	591
Chloride	mg/L	42	44	43	41
Magnesium	mg/L	229	223	216	217
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	0.40
Nitrogen, Nitrate+Nitrite as N	mg/L	0.4	0.4	0.4	ND(0.1)
Potassium	mg/L	8	8	7	8
Sodium	mg/L	147	147	136	148
Sulfate	mg/L	2400	2510	2430	2370
pH	s.u.	7.60	6.78	6.91	6.61
Solids, Total Dissolved TDS @ 180 C	mg/L	3950	3900	3840	3700
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	0.05	0.05	0.04	0.05
Lead	mg/L	ND(0.001)	ND(0.001)	0.003	ND(0.001)
Manganese	mg/L	3.17	3.29	2.98	3.16
Molybdenum	mg/L	0.5	0.6	0.6	0.7
Nickel	mg/L	0.06	0.08	0.06	0.06
Uranium	mg/L	0.120	0.140	0.143	0.143
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	0.016
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	27.5 *	20.4 *	8.7	9.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	6.0	4.5	0.9	1.0
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	0.4	-0.3	0.4	0.5
Lead 210 precision (±)	pCi/L	0.9	0.6	0.8	0.6
Lead 210 MDC	pCi/L	1.6	1.0	1.3	1.0
Radium 226	pCi/L	8.2	10	8.2	7.2
Radium 226 precision (±)	pCi/L	1.6	2.0	0.46	0.50
Radium 226 MDC	pCi/L	0.13	0.15	0.09	0.13
Radium 228	pCi/L	9.7	12	20	8.7
Radium 228 precision (±)	pCi/L	2.0	2.4	1.9	0.96
Radium 228 MDC	pCi/L	1.3	1.3	1.9	0.99
Thorium 230	pCi/L	0.005	0.1	0.06	0.08
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.08	0.04
Thorium 230 MDC	pCi/L	0.2	0.08	0.1	0.05
A/C Balance (± 5)	%	0.10	-2.71	-3.15	-2.58
Anions	meq/L	57.0	59.9	58.1	56.9
Cations	meq/L	57.1	56.8	54.5	54.0
Solids, Total Dissolved Calculated	mg/L	3600	3800	3600	3600
TDS Balance (0.80 - 1.20)		1.08	1.03	1.05	1.04
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

SEMI-ANNUAL

EFFLUENT AND ENVIRONMENTAL MONITORING REPORT

JANUARY TO JUNE OF 2015

AVAILABLE MONITORING DATA

- **ENVIRONMENTAL INSPECTION REPORT (continued this procedure to show and maintain the integrity of the tailings area).**

- **GROUND WATER RESULT (GW-3 water well reported in accordance to Regulatory Guide 4.14 format).**

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION REPORTS

ENVIRONMENTAL INSPECTION

DATE: 1-29-15 TIME START: 1030

INSPECTOR: Mary Chantilly J. TIME END: 1135

TAILINGS AREA:	OKAY		PROBLEM	COMMENTS
1. Fences	✓			
2. Air Monitors	—	NA	—	Under RWP
3. Radiation Warning Signs	✓			
4. Locked Gates	✓			

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 2-24-15 TIME START: 1130

INSPECTOR: Mark Chaddock Jr. TIME END: 1235

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	— NA	—	Under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 3-24-15 TIME START: 0955

INSPECTOR: Mel Chudley Jr. TIME END: 1200

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	— NA	—	Under RWP
3. Radiation Warning Signs	✓		
4. Locked Gates	✓		

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 4-20-15 TIME START: 0940

INSPECTOR: Nelf Chadilly Jr. TIME END: 1100

TAILINGS AREA:	OKAY		PROBLEM	COMMENTS
1. Fences	✓			
2. Air Monitors	–	NA	–	Under RWP
3. Radiation Warning Signs	✓			
4. Locked Gates	✓			

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 5-27-15 TIME START: 1028

INSPECTOR: Mel Chisolm Jr. TIME END: 1200

TAILINGS AREA:	OKAY		PROBLEM	COMMENTS
1. Fences	✓			
2. Air Monitors	–	NA	–	Under RWP
3. Radiation Warning Signs	✓			
4. Locked Gates	✓			

ACTION TAKEN:

ENVIRONMENTAL INSPECTION

DATE: 6-24-15 TIME START: 0900

INSPECTOR: Mary Cinelli Jr. TIME END: 1530

TAILINGS AREA:	OKAY	PROBLEM	COMMENTS
1. Fences	✓		
2. Air Monitors	— NA	—	Under RWP
3. Radiation Warning Signs		✓	See below
4. Locked Gates	✓		

ACTION TAKEN: Fourteen weather worn Radioactive material Caution signs (tailings pond area), one No Trespassing sign (tailings main entry gate) and one graffiti damaged No Trespassing sign (mill scale house gate) were replaced.

GROUND WATER – GW SERIES

GROUND WATER – GW SERIES

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
1/6/2015	GW-3	Ground	U-Nat (dissolved) or total		2.65E-07		2.00E-10
1st-Qr.		Water Well					
			Th-230 (dissolved) or total		1.00E-11	6.00E-11	2.00E-10
			Ra-226 (dissolved) or total		1.10E-10	1.10E-10	2.00E-10
			Pb-210 (dissolved) or total		-3.00E-10	8.00E-10	1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.89
Cond. (µ MHOS) = 5,180
Water Depth (Ft.) = 55.56
Temp. (°C) = 12.6

COMMENTS:

QUARTERLY LIQUID SAMPLES

Date/Qr.	Location	Type	Radionuclide	Concentration Mg/l	Concentration µci/ml	Error Est. µci/ml	LLD µci/ml
4/7/2015	GW-3	Ground	U-Nat (dissolved) or total		2.47E-07		2.00E-10
2nd-Qr.		Water Well					
			Th-230 (dissolved) or total		3.00E-10	2.00E-10	2.00E-10
			Ra-226 (dissolved) or total		3.10E-10	1.30E-10	2.00E-10
			Pb-210 (dissolved) or total		-6.00-10	7.00E-10	1.00E-09
			Po-210 (dissolved) or total				1.00E-09

UNC Field Data:
PH (STD. Units) = 6.65
Cond. (ω MHOS) = 5,290
Water Depth (Ft.) = 55.77
Temp. (°C) = 14.0

COMMENTS:

SEMI-ANNUAL GROUND WATER QUALITY ASSURANCE REPORT

FIRST HALF OF 2015
(JANUARY THRU JUNE)

SEMI – ANNUAL QUALITY ASSURANCE

CHURCH ROCK SITE

JANUARY TO JUNE OF 2015 SAMPLING EVENTS

AUGUST – 2015

TABLE OF CONTENTS

1.0 Requirements

2.0 Field Sampling Procedures and QA/QC Report

3.0 Chain of Custody

4.0 Laboratory Quality Control

5.0 Data Validation

Appendix – A: Quarterly Field data sheet

Appendix – B: Quarterly AQ/QC Field Blank and Duplicate Sample Report

Appendix – C: Quarterly Chain of Custody

Appendix – D: Quarterly Laboratory Quality Control and Performance Report (1 of 2&2 of 2)

1.0 REQUIREMENTS

The quality assurance and control procedures are contained in Sec. 3.0 of the Remedial Action Plan of Church Rock Site dated April 1989. The procedure addresses sampling, chain of custody, laboratory quality control, and data validation. These requirements became effective July3, 1989, when United Nuclear received the Administrative Order on the Church Rock Site from the U.S. Environmental Protection Agency (USEPA).

2.0 FIELD SAMPLING PROCEDURES AND QA/QC REPORT

Copies of the 2015 quarterly (1st and 2nd) field low flow purging and sampling data sheets are included in Appendix A. These sheets indicate the field parameter of pH, temperature, conductivity and the water level drop in the well if any, during the sampling. The quarterly QA/QC Field Blank, Rinsate and Duplicate analysis report are included in Appendix B.

3.0 CHAIN OF CUSTODY

Copies of the quarterly Chain of Custody report are included in Appendix C. Energy Laboratories, Inc., our contract laboratory is located in Casper, Wyoming. Energy Labs inspect the sample shipment upon arrival to verify the information of the Chain of Custody form and to determine if sample arrive at the appropriate temperature.

4.0 LABORATORY CONTROL

Copies of the quarterly internal Quality Control reports prepared by Energy Laboratories and associated EPA performance evaluations are included in Appendix D (1 of 2 and 2 of 2).

5.0 DATA EVALUATION

Analytical reports are reviewed by the Remedial Project Managers and site Radiation Safety Officer after receipt from Energy Labs. Significant increase or decrease and out of range values are identified and the laboratory is requested to recheck the suspect values. The laboratory responds by checking transcription for these items, and where necessary, repeats the analysis. A revised report is then issued for that sample if an error is discovered.

APPENDIX – A

QUARTERLY

FIELD DATA SHEET

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.99	1-5-15/0738	mc
7-Buffer	7.03	1-5-15/0737	mc

(Quar. Performance Monitoring – Pg. 1 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 20 15 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1469	1-5-15/0739	mc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	509-D	82.41'	82.46'	1st Cond. 5,410	2nd Cond. 5,640	Stable Cond. 5,750	Ending Cond. 6,370
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 7.28	2nd pH 7.24	Stable pH 7.19	Ending pH 6.63
	0845	0.221'	0.232'	1st Temp. 8.5	2nd Temp. 8.9	Stable Temp. 9.5	Ending Temp. 10.8
				Comments: Conductivity is in uS/cm; Temperature is in °C; pH is in std. units			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-23	58.98'	59.33'	1st Cond. 4,280	2nd Cond. 4,270	Stable Cond. 4,280	Ending Cond. 4,410
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 7.34	2nd pH 7.30	Stable pH 7.26	Ending pH 6.95
	0932	2.809'	2.516'	1st Temp. 8.5	2nd Temp. 8.8	Stable Temp. 8.9	Ending Temp. 11.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	803	65.62'	65.77'	1st Cond. 5,280	2nd Cond. 5,520	Stable Cond. 5,810	Ending Cond. 6,150
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 6.81	2nd pH 6.81	Stable pH 6.80	Ending pH 6.72
	1020	11.073'	10.965'	1st Temp. 10.6	2nd Temp. 10.6	Stable Temp. 10.7	Ending Temp. 12.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	808	52.95'	53.05'	1st Cond. 5,260	2nd Cond. 5,660	Stable Cond. 5,890	Ending Cond. 6,390
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 7.21	2nd pH 7.08	Stable pH 7.00	Ending pH 6.68
	1102	10.663'	10.521'	1st Temp. 11.6	2nd Temp. 11.7	Stable Temp. 11.7	Ending Temp. 13.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	802	50.84'	50.89'	1st Cond. 5,510	2nd Cond. 5,890	Stable Cond. 6,210	Ending Cond. 6,500
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 6.67	2nd pH 6.68	Stable pH 6.70	Ending pH 6.73
	1148	16.740'	16.733'	1st Temp. 12.9	2nd Temp. 12.7	Stable Temp. 12.7	Ending Temp. 14.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	632	47.44'	51.77'	1st Cond. 6,050	2nd Cond. 6,330	Stable Cond. 6,380	Ending Cond. 6,640
1-5-15	Time	Bubbler Start	Bubbler End	1st pH 7.26	2nd pH 7.18	Stable pH 7.05	Ending pH 6.65
	1235	9.515'	5.129'	1st Temp. 12.3	2nd Temp. 12.3	Stable Temp. 12.3	Ending Temp. 12.8
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	1-6-15/0808	RE
7-Buffer	7.09	1-6-15/0807	RE

(Quar. Performance Monitoring – Pg. 2 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1494	1-6-15/0806	RE

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	801			1st Cond. 5,820	2nd Cond. 6,390	Stable Cond. 6,560	Ending Cond. 6,710
1-5-15		54.32'	56.07'	1st pH 6.93	2nd pH 6.93	Stable pH 6.91	Ending pH 6.76
	Time	Bubbler Start	Bubbler End	1st Temp. 13.3	2nd Temp. 13.1	Stable Temp. 13.1	Ending Temp. 13.1
	1320	7.012'	5.552'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-2			1st Cond. 6,520	2nd Cond. 6,790	Stable Cond. 7,200	Ending Cond. 7,860
1-5-15		58.82'	59.58'	1st pH 7.21	2nd pH 7.11	Stable pH 6.97	Ending pH 6.53
	Time	Bubbler Start	Bubbler End	1st Temp. 9.9	2nd Temp. 9.7	Stable Temp. 9.8	Ending Temp. 11.4
	1415			Comments: Transducer (bubbler) malfunctioned.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-1			1st Cond. 5,400	2nd Cond. 5,510	Stable Cond. 5,580	Ending Cond. 6,500
1-5-15		64.22'	64.26'	1st pH 7.64	2nd pH 7.65	Stable pH 7.56	Ending pH 6.81
	Time	Bubbler Start	Bubbler End	1st Temp. 12.2	2nd Temp. 12.2	Stable Temp. 12.0	Ending Temp. 11.5
	1510	6.365'	6.327'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28			1st Cond. 4,700	2nd Cond. 4,720	Stable Cond. 4,740	Ending Cond. 4,750
1-5-15		65.37'	65.92'	1st pH 7.84	2nd pH 7.86	Stable pH 7.87	Ending pH 7.12
	Time	Bubbler Start	Bubbler End	1st Temp. 10.6	2nd Temp. 10.7	Stable Temp. 10.8	Ending Temp. 10.3
	1602	4.949'	4.535'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28			1st Cond. 4,730	2nd Cond. 4,730	Stable Cond. 4,730	Ending Cond. 4,810
	DUPLICATE	65.92'	65.98'	1st pH 7.09	2nd pH 7.08	Stable pH 7.07	Ending pH 7.09
1-5-15	Time	Bubbler Start	Bubbler End	1st Temp. 10.5	2nd Temp. 10.4	Stable Temp. 10.5	Ending Temp. 9.4
	1640	4.535'	4.480'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	624			1st Cond. 4,410	2nd Cond. 4,710	Stable Cond. 4,900	Ending Cond. 5,150
1-6-15		52.92'	53.05'	1st pH 7.24	2nd pH 7.00	Stable pH 6.93	Ending pH 6.74
	Time	Bubbler Start	Bubbler End	1st Temp. 13.3	2nd Temp. 12.5	Stable Temp. 12.5	Ending Temp. 12.1
	0955	9.444'	9.441'	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

(Quar. Performance Monitoring – Pg. 3 of 7)

GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	SBL-1			1st Cond. 6,780	2nd Cond. 7,020	Stable Cond. 7,090	Ending Cond. 7,180
				1st pH 7.53	2nd pH 7.46	Stable pH 7.32	Ending pH 6.73
		50.98'	52.03'	1st Temp. 11.7	2nd Temp. 11.6	Stable Temp. 11.7	Ending Temp. 12.5
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1025	3.664'	2.641'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-3			1st Cond. 3,820	2nd Cond. 4,280	Stable Cond. 4,960	Ending Cond. 5,180
				1st pH 6.89	2nd pH 6.89	Stable pH 6.88	Ending pH 6.89
		55.56'	56.49'	1st Temp. 12.5	2nd Temp. 12.5	Stable Temp. 12.5	Ending Temp. 12.6
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1130	0.181'	0.187'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-25			1st Cond. 3,710	2nd Cond. 3,880	Stable Cond. 4,040	Ending Cond. 4,500
				1st pH 7.09	2nd pH 7.02	Stable pH 7.01	Ending pH 6.90
		56.00'	56.10'	1st Temp. 12.7	2nd Temp. 12.8	Stable Temp. 12.6	Ending Temp. 13.1
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1240	4.815'	4.719'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	627			1st Cond. 4,070	2nd Cond. 4,270	Stable Cond. 4,360	Ending Cond. 4,440
				1st pH 7.25	2nd pH 7.24	Stable pH 7.22	Ending pH 7.01
		60.58'	60.70'	1st Temp. 12.7	2nd Temp. 12.7	Stable Temp. 12.9	Ending Temp. 13.8
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1335	1.905'	1.850'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	614			1st Cond. 6,640	2nd Cond. 7,180	Stable Cond. 7,440	Ending Cond. 7,610
				1st pH 7.94	2nd pH 7.45	Stable pH 7.46	Ending pH 6.61
		105.45'	105.73'	1st Temp. 12.8	2nd Temp. 12.8	Stable Temp. 12.8	Ending Temp. 12.8
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1448	0.932'	0.253'				

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	515-A			1st Cond. 8,920	2nd Cond. 9,130	Stable Cond. 9,190	Ending Cond. 9,100
				1st pH 7.35	2nd pH 7.36	Stable pH 7.36	Ending pH 6.19
		106.25'	111.68'	1st Temp. 12.0	2nd Temp. 12.1	Stable Temp. 12.0	Ending Temp. 11.8
1-6-15	Time	Bubbler Start	Bubbler End	Comments:			
	1556	6.669'	0.280'				

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.98	1-7-15/0847	MC
7-Buffer	7.09	1-7-15/0845	MC

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GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1484	1-7-15/0846	MC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	604			1st Cond. 6,180	2nd Cond. 6,260	Stable Cond. 6,270	Ending Cond. 6,400
		105.18'	106.17'	1st pH 5.89	2nd pH 5.86	Stable pH 5.82	Ending pH 5.55
1-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 10.4	2nd Temp. 10.5	Stable Temp. 10.5	Ending Temp. 10.0
	1648	2.940'	3.133'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-4			1st Cond. 3,830	2nd Cond. 4,000	Stable Cond. 4,090	Ending Cond. 4,290
		208.48'	209.01'	1st pH 6.87	2nd pH 6.91	Stable pH 6.95	Ending pH 6.93
1-7-15	Time	Bubbler Start	Bubbler End	1st Temp. 12.2	2nd Temp. 12.3	Stable Temp. 12.2	Ending Temp. 12.5
	0935			Comments: Bubbler (transducer) malfunctioned.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-5			1st Cond. 3,700	2nd Cond. 4,000	Stable Cond. 4,080	Ending Cond. 4,080
		127.12'	127.72'	1st pH 6.18	2nd pH 6.16	Stable pH 6.15	Ending pH 6.09
1-7-15	Time	Bubbler Start	Bubbler End	1st Temp. 12.3	2nd Temp. 12.2	Stable Temp. 12.3	Ending Temp. 12.8
	1032	3.621'	3.053'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-7			1st Cond. 2,060	2nd Cond. 7,020	Stable Cond. 7,080	Ending Cond. 7,010
		116.76'	118.59'	1st pH 7.45	2nd pH 7.47	Stable pH 7.50	Ending pH 6.31
1-7-15	Time	Bubbler Start	Bubbler End	1st Temp. 11.7	2nd Temp. 11.7	Stable Temp. 11.7	Ending Temp. 12.9
	1125	10.194'	8.443'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2			1st Cond. 2,520	2nd Cond. 2,920	Stable Cond. 3,030	Ending Cond. 3,130
		174.69'	175.44'	1st pH 7.17	2nd pH 7.20	Stable pH 7.23	Ending pH 7.05
1-7-15	Time	Bubbler Start	Bubbler End	1st Temp. 12.8	2nd Temp. 12.8	Stable Temp. 12.5	Ending Temp. 13.3
	1215	6.741'	5.990'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2 DUPLICATE			1st Cond. 3,130	2nd Cond. 3,100	Stable Cond. 3,130	Ending Cond. 3,210
		175.44'	176.24'	1st pH 7.04	2nd pH 7.03	Stable pH 7.03	Ending pH 7.01
1-7-15	Time	Bubbler Start	Bubbler End	1st Temp. 13.1	2nd Temp. 13.0	Stable Temp. 13.1	Ending Temp. 13.4
	1250	5.990'	5.194'	Comments:			

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PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

GROUND WATER MONITORING FIELD DATA SHEET

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	TWQ-142	202.05'	202.71'	1st Cond. 1,810	2nd Cond. 1,865	Stable Cond. 1,814	Ending Cond. 1,854
1-7-15	Time	Bubbler Start	Bubbler End	1st pH 7.92	2nd pH 7.90	Stable pH 7.89	Ending pH 8.09
	1410	18.652'	18.350'	1st Temp. 13.2	2nd Temp. 13.2	Stable Temp. 13.1	Ending Temp. 13.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 4	2nd Cond.	Stable Cond.	Ending Cond.
1-7-15	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH	Stable pH	Ending pH
	1450			1st Temp. 14.7	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 4	2nd Cond.	Stable Cond.	Ending Cond.
1-7-15	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH	Stable pH	Ending pH
	1450			1st Temp. 14.7	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
	Time	Bubbler Start	Bubbler End	1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	3.95	1-12-15/0842	[illegible]
7-Buffer	7.04	1-12-15/0833	[illegible]

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GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1441	1-12-15/0843	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	613	79.79'	80.86'	1st Cond. 8,600	2nd Cond. 8,720	Stable Cond. 8,780	Ending Cond. 8,840
	Time	Bubbler Start	Bubbler End	1st pH 2.98	2nd pH 2.98	Stable pH 2.97	Ending pH 3.01
	0930	5.009'	3.918'	1st Temp. 9.7	2nd Temp. 9.7	Stable Temp. 9.8	Ending Temp. 10.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	517	105.35'	111.24'	1st Cond. 5,240	2nd Cond. 5,330	Stable Cond. 5,410	Ending Cond. 5,410
	Time	Bubbler Start	Bubbler End	1st pH 2.82	2nd pH 2.81	Stable pH 2.80	Ending pH 2.80
	1015	1.285'	0.313'	1st Temp. 10.0	2nd Temp. 10.3	Stable Temp. 10.2	Ending Temp. 10.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	708	157.05'	158.04'	1st Cond. 5,340	2nd Cond. 5,470	Stable Cond. 5,560	Ending Cond. 5,560
	Time	Bubbler Start	Bubbler End	1st pH 2.77	2nd pH 2.77	Stable pH 2.77	Ending pH 3.44
	1135	1.511'	0.538'	1st Temp. 10.0	2nd Temp. 10.1	Stable Temp. 10.1	Ending Temp. 10.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	711	183.57'	185.09'	1st Cond. 4,610	2nd Cond. 4,640	Stable Cond. 4,630	Ending Cond. 4,330
	Time	Bubbler Start	Bubbler End	1st pH 2.96	2nd pH 2.95	Stable pH 2.91	Ending pH 4.78
	1255	8.518'	6.948'	1st Temp. 9.7	2nd Temp. 9.7	Stable Temp. 10.0	Ending Temp. 11.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	EPA-13	168.72'	169.79'	1st Cond. 5,970	2nd Cond. 5,960	Stable Cond. 5,940	Ending Cond. 6,100
	Time	Bubbler Start	Bubbler End	1st pH 6.30	2nd pH 6.34	Stable pH 6.37	Ending pH 6.13
	1336	3.035'	1.978'	1st Temp. 9.9	2nd Temp. 9.8	Stable Temp. 10.2	Ending Temp. 10.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-12-15	719	170.04'	170.42'	1st Cond. 4,230	2nd Cond. 4,550	Stable Cond. 4,910	Ending Cond. 4,910
	Time	Bubbler Start	Bubbler End	1st pH 5.36	2nd pH 5.36	Stable pH 5.35	Ending pH 5.35
	1428	0.382'	0.292'	1st Temp. 10.7	2nd Temp. 10.7	Stable Temp. 10.6	Ending Temp. 10.6
				Comments:			

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PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.04	1-13-15/0759	AC
7-Buffer	7.05	1-13-15/0759	AC

GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1448	1-13-15/0758	AC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	420	155.24'	156.76'	1st Cond. 3,760	2nd Cond. 3,770	Stable Cond. 3,760	Ending Cond. 3,890
1-12-15	Time	Bubbler Start	Bubbler End	1st pH 7.28	2nd pH 7.29	Stable pH 7.32	Ending pH 6.94
	1547	0.094'	0.094'	1st Temp. 10.3	2nd Temp. 10.4	Stable Temp. 10.4	Ending Temp. 10.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-14	124.52'	125.07'	1st Cond. 3,800	2nd Cond. 3,770	Stable Cond. 3,810	Ending Cond. 3,810
1-12-15	Time	Bubbler Start	Bubbler End	1st pH 6.75	2nd pH 6.73	Stable pH 6.70	Ending pH 6.70
	1640	0.229'	0.229'	1st Temp. 9.5	2nd Temp. 9.5	Stable Temp. 9.7	Ending Temp. 9.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	717	133.03'	133.31'	1st Cond. 5,410	2nd Cond. 5,460	Stable Cond. 5,510	Ending Cond. 5,640
1-13-15	Time	Bubbler Start	Bubbler End	1st pH 3.67	2nd pH 3.67	Stable pH 3.64	Ending pH 3.58
	0850	0.300'	0.318'	1st Temp. 11.5	2nd Temp. 11.5	Stable Temp. 11.5	Ending Temp. 11.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	717 DUPLICATE	133.31'	133.34'	1st Cond. 5,630	2nd Cond. 5,630	Stable Cond. 5,620	Ending Cond. 5,650
1-13-15	Time	Bubbler Start	Bubbler End	1st pH 3.58	2nd pH 3.58	Stable pH 3.59	Ending pH 3.58
	0925	0.318'	0.325'	1st Temp. 11.0	2nd Temp. 11.1	Stable Temp. 11.1	Ending Temp. 10.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
1-13-15				1st pH 5.19	2nd pH	Stable pH	Ending pH
	Time	Bubbler Start	Bubbler End	1st Temp. 7.4	2nd Temp.	Stable Temp.	Ending Temp.
	1525			Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 5	2nd Cond.	Stable Cond.	Ending Cond.
1-13-15				1st pH 6.12	2nd pH	Stable pH	Ending pH
	Time	Bubbler Start	Bubbler End	1st Temp. 17.5	2nd Temp.	Stable Temp.	Ending Temp.
	1600			Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.04	1-13-15/0759	TC
7-Buffer	7.05	1-13-15/0757	TC

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FIRST QUARTER 2015 SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1448	1-13-15/0758	TC

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	NBL-2	167.08'	167.24'	1st Cond. 3,360	2nd Cond. 3,350	Stable Cond. 3,350	Ending Cond. 3,420
	Time	Bubbler Start	Bubbler End	1st pH 6.74	2nd pH 6.78	Stable pH 6.80	Ending pH 6.67
	1005			1st Temp. 8.9	2nd Temp. 8.9	Stable Temp. 9.0	Ending Temp. 9.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	MW-7	195.03'	195.08'	1st Cond. 2,510	2nd Cond. 3,660	Stable Cond. 3,650	Ending Cond. 3,680
	Time	Bubbler Start	Bubbler End	1st pH 7.47	2nd pH 7.51	Stable pH 7.53	Ending pH 6.86
	1030			1st Temp. 9.0	2nd Temp. 9.0	Stable Temp. 9.1	Ending Temp. 8.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	PB-3	190.66'		1st Cond. 3,900	2nd Cond. 3,910	Stable Cond. 3,910	Ending Cond. 3,900
	Time	Bubbler Start	Bubbler End	1st pH 6.12	2nd pH 6.07	Stable pH 5.99	Ending pH 5.75
	1140			1st Temp. 14.9	2nd Temp. 14.9	Stable Temp. 14.9	Ending Temp. 15.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	PB-4	189.74'	190.25'	1st Cond. 4,500	2nd Cond. 4,500	Stable Cond. 4,500	Ending Cond. 4,960
	Time	Bubbler Start	Bubbler End	1st pH 3.01	2nd pH 3.00	Stable pH 3.00	Ending pH 2.87
	1220			1st Temp. 7.6	2nd Temp. 7.6	Stable Temp. 7.6	Ending Temp. 8.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	MW-6	198.18'		1st Cond. 4,290	2nd Cond. 4,290	Stable Cond. 4,290	Ending Cond. 4,300
	Time	Bubbler Start	Bubbler End	1st pH 6.54	2nd pH 6.72	Stable pH 6.84	Ending pH 6.97
	1325			1st Temp. 14.3	2nd Temp. 14.3	Stable Temp. 14.3	Ending Temp. 14.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
1-13-15	NW-1	198.60'	198.90'	1st Cond. 3,590	2nd Cond. 3,610	Stable Cond. 3,640	Ending Cond. 3,650
	Time	Bubbler Start	Bubbler End	1st pH 6.36	2nd pH 6.59	Stable pH 6.81	Ending pH 7.09
	0954			1st Temp. 9.7	2nd Temp. 9.6	Stable Temp. 9.5	Ending Temp. 9.5
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

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GROUND WATER MONITORING FIELD DATA SHEET

FIRST QUARTER 20 15 SAMPLING

Cond. Standard Verification Check

STD. µS/cm Reading	Date/Time	Initial
1413 µS/cm		

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-4	200.17'	200.43'	1st Cond. 3,830	2nd Cond. 3,880	Stable Cond. 3,890	Ending Cond. 3,900
1-13-15	Time 1017	Bubbler Start	Bubbler End	1st pH 7.07	2nd pH 7.02	Stable pH 7.01	Ending pH 7.01
				1st Temp. 9.3	2nd Temp. 9.3	Stable Temp. 9.3	Ending Temp. 9.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-3	188.13'	188.20'	1st Cond. 3,880	2nd Cond. 3,830	Stable Cond. 3,810	Ending Cond. 3,810
1-13-15	Time 1044	Bubbler Start	Bubbler End	1st pH 6.75	2nd pH 6.84	Stable pH 6.89	Ending pH 6.92
				1st Temp. 8.8	2nd Temp. 8.8	Stable Temp. 8.7	Ending Temp. 8.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-5	187.89'	188.03'	1st Cond. 4,060	2nd Cond. 4,230	Stable Cond. 4,260	Ending Cond. 4,290
1-13-15	Time 1100	Bubbler Start	Bubbler End	1st pH 6.74	2nd pH 6.72	Stable pH 6.70	Ending pH 6.69
				1st Temp. 12.1	2nd Temp. 12.1	Stable Temp. 12.0	Ending Temp. 11.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-2	197.35'	197.53'	1st Cond. 3,820	2nd Cond. 4,060	Stable Cond. 4,090	Ending Cond. 4,110
1-13-15	Time 1119	Bubbler Start	Bubbler End	1st pH 6.66	2nd pH 6.55	Stable pH 6.51	Ending pH 6.48
				1st Temp. 11.3	2nd Temp. 11.3	Stable Temp. 11.2	Ending Temp. 11.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RW-A	175.15'	175.31'	1st Cond. 4,030	2nd Cond. 4,130	Stable Cond. 4,150	Ending Cond. 4,160
1-13-15	Time 1140	Bubbler Start	Bubbler End	1st pH 6.64	2nd pH 6.44	Stable pH 6.39	Ending pH 6.36
				1st Temp. 10.8	2nd Temp. 10.8	Stable Temp. 10.7	Ending Temp. 10.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	4-6-15/0845	mc
7-Buffer	7.01	4-6-15/0847	mc

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GROUND WATER MONITORING FIELD DATA SHEET
Second QUARTER 20 15
SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1433	4-6-15/0846	mc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	509-D	82.31'	82.36'	1st Cond. 5,830	2nd Cond. 6,100	Stable Cond. 6,250	Ending Cond. 6,590
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 6.61	2nd pH 6.57	Stable pH 6.57	Ending pH 6.42
	0907	0.189'	0.185'	1st Temp. 12.2	2nd Temp. 12.3	Stable Temp. 12.2	Ending Temp. 12.6
				Comments: Conductivity is in uS/cm Temperature is in °C pH is in std. units			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-23	58.77'	59.13'	1st Cond. 4,470	2nd Cond. 4,470	Stable Cond. 4,480	Ending Cond. 4,490
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 7.14	2nd pH 7.02	Stable pH 6.95	Ending pH 6.69
	1003	2.400'	2.768'	1st Temp. 12.2	2nd Temp. 12.1	Stable Temp. 12.1	Ending Temp. 13.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	803	65.42'	65.57'	1st Cond. 5,320	2nd Cond. 5,580	Stable Cond. 5,960	Ending Cond. 5,990
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 6.57	2nd pH 6.57	Stable pH 6.57	Ending pH 6.52
	1050	11.335'	11.194'	1st Temp. 14.0	2nd Temp. 13.6	Stable Temp. 13.7	Ending Temp. 13.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	808	52.68'	52.86'	1st Cond. 5,450	2nd Cond. 5,870	Stable Cond. 6,030	Ending Cond. 6,480
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 6.86	2nd pH 6.78	Stable pH 6.69	Ending pH 6.49
	1135	10.943'	10.779'	1st Temp. 13.5	2nd Temp. 13.5	Stable Temp. 13.4	Ending Temp. 14.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	802	50.97'	51.02'	1st Cond. 5,230	2nd Cond. 5,610	Stable Cond. 5,920	Ending Cond. 6,540
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 6.73	2nd pH 6.64	Stable pH 6.61	Ending pH 6.56
	1225	16.712'	15.710'	1st Temp. 14.4	2nd Temp. 14.3	Stable Temp. 14.2	Ending Temp. 14.3
				Comments: check pump bladder (some air bubbles in line).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	632	47.58'	52.02'	1st Cond. 6,480	2nd Cond. 6,660	Stable Cond. 6,590	Ending Cond. 6,620
4-6-15	Time	Bubbler Start	Bubbler End	1st pH 6.77	2nd pH 6.71	Stable pH 6.68	Ending pH 6.49
	1305	9.457'	5.062'	1st Temp. 13.2	2nd Temp. 13.3	Stable Temp. 13.2	Ending Temp. 13.8
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	801			1st Cond. 6,000	2nd Cond. 6,280	Stable Cond. 6,510	Ending Cond. 6,790
		54.81'	56.21'	1st pH 6.98	2nd pH 6.96	Stable pH 6.92	Ending pH 6.30
4-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 14.2	2nd Temp. 14.0	Stable Temp. 14.1	Ending Temp. 14.7
	1350	6.914'	5.509'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-2			1st Cond. 6,850	2nd Cond. 7,180	Stable Cond. 7,450	Ending Cond. 7,930
		58.68'	59.48'	1st pH 7.10	2nd pH 6.94	Stable pH 6.81	Ending pH 6.36
4-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 11.4	2nd Temp. 11.2	Stable Temp. 11.2	Ending Temp. 13.4
	1440	12.09'	11.294'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	GW-1			1st Cond. 5,330	2nd Cond. 5,440	Stable Cond. 5,650	Ending Cond. 6,320
		64.42'	64.46'	1st pH 7.29	2nd pH 7.16	Stable pH 7.08	Ending pH 6.62
4-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 14.5	2nd Temp. 14.1	Stable Temp. 14.0	Ending Temp. 14.1
	1535	6.308'	6.261'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28			1st Cond. 4,630	2nd Cond. 4,700	Stable Cond. 4,690	Ending Cond. 4,720
		65.36'	65.87'	1st pH 7.47	2nd pH 7.40	Stable pH 7.33	Ending pH 6.82
4-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 13.9	2nd Temp. 13.9	Stable Temp. 13.7	Ending Temp. 15.0
	1620	5.011'	4.533'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-28 DUPLICATE			1st Cond. 4,810	2nd Cond. 4,840	Stable Cond. 4,830	Ending Cond. 4,750
		65.87'	65.99'	1st pH 6.81	2nd pH 6.80	Stable pH 6.80	Ending pH 6.83
4-6-15	Time	Bubbler Start	Bubbler End	1st Temp. 14.2	2nd Temp. 14.3	Stable Temp. 14.0	Ending Temp. 14.5
	1700	4.533'	4.446'	Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.04	4-7-15/0829	mc
7-Buffer	7.03	4-7-15/0828	mc

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1452	4-7-15/0830	mc

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	624	53.24'	53.26'	1st Cond. 4,440	2nd Cond. 4,950	Stable Cond. 5,240	Ending Cond. 5,350
	Time	Bubbler Start	Bubbler End	1st pH 6.75	2nd pH 6.72	Stable pH 6.69	Ending pH 6.58
	0850	9.296'	9.269'	1st Temp. 12.4	2nd Temp. 12.5	Stable Temp. 12.4	Ending Temp. 13.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	SBL-1	50.99'	52.02'	1st Cond. 6,870	2nd Cond. 7,200	Stable Cond. 7,340	Ending Cond. 7,410
	Time	Bubbler Start	Bubbler End	1st pH 6.69	2nd pH 6.69	Stable pH 6.69	Ending pH 6.68
	0942	3.734'	2.716'	1st Temp. 13.2	2nd Temp. 13.3	Stable Temp. 13.0	Ending Temp. 14.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	GW-3	55.77'	56.61'	1st Cond. 4,890	2nd Cond. 5,010	Stable Cond. 5,130	Ending Cond. 5,290
	Time	Bubbler Start	Bubbler End	1st pH 6.64	2nd pH 6.65	Stable pH 6.64	Ending pH 6.65
	1042	0.146'	0.155'	1st Temp. 13.8	2nd Temp. 13.9	Stable Temp. 14.0	Ending Temp. 14.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	EPA-25	56.16'	56.26'	1st Cond. 3,470	2nd Cond. 3,800	Stable Cond. 4,110	Ending Cond. 4,520
	Time	Bubbler Start	Bubbler End	1st pH 7.15	2nd pH 7.08	Stable pH 6.98	Ending pH 6.79
	1200	4.741'	4.696'	1st Temp. 13.5	2nd Temp. 13.5	Stable Temp. 13.3	Ending Temp. 14.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	627	60.54'	60.62'	1st Cond. 3,890	2nd Cond. 4,250	Stable Cond. 4,330	Ending Cond. 4,390
	Time	Bubbler Start	Bubbler End	1st pH 7.07	2nd pH 7.05	Stable pH 7.03	Ending pH 6.94
	1300	2.200'	1.987'	1st Temp. 15.1	2nd Temp. 15.2	Stable Temp. 14.9	Ending Temp. 15.2
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-7-15	614	105.22'	106.05'	1st Cond. 6,630	2nd Cond. 7,280	Stable Cond. 7,500	Ending Cond. 7,690
	Time	Bubbler Start	Bubbler End	1st pH 7.05	2nd pH 7.06	Stable pH 7.06	Ending pH 6.42
	1355	1.205'	0.420'	1st Temp. 14.1	2nd Temp. 14.3	Stable Temp. 14.1	Ending Temp. 15.1
				Comments:			

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PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.05	4-8-15/0838	[illegible]
7-Buffer	7.07	4-8-15/0837	[illegible]

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1453	4-8-15/0837	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	515-A	106.09'	113.34'	1st Cond. 9,000	2nd Cond. 9,120	Stable Cond. 9,170	Ending Cond. 9,040
4-7-15	Time	Bubbler Start	Bubbler End	1st pH 7.17	2nd pH 7.17	Stable pH 7.18	Ending pH 5.99
	1500	6.198'	0.253'	1st Temp. 13.6	2nd Temp. 13.3	Stable Temp. 13.3	Ending Temp. 15.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	604	105.09'	105.91'	1st Cond. 5,940	2nd Cond. 5,950	Stable Cond. 6,070	Ending Cond. 6,350
4-7-15	Time	Bubbler Start	Bubbler End	1st pH 5.89	2nd pH 5.86	Stable pH 5.82	Ending pH 5.49
	1552	4.323'	3.511'	1st Temp. 14.1	2nd Temp. 13.8	Stable Temp. 13.7	Ending Temp. 14.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-7	116.43'	118.22'	1st Cond. 7,190	2nd Cond. 7,280	Stable Cond. 7,340	Ending Cond. 7,200
4-8-15	Time	Bubbler Start	Bubbler End	1st pH 7.37	2nd pH 7.41	Stable pH 7.42	Ending pH 6.20
	0925	10.688'	8.892'	1st Temp. 12.2	2nd Temp. 12.2	Stable Temp. 12.3	Ending Temp. 13.0
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-5	126.74'	127.42'	1st Cond. 4,190	2nd Cond. 4,210	Stable Cond. 4,230	Ending Cond. 4,170
4-8-15	Time	Bubbler Start	Bubbler End	1st pH 6.33	2nd pH 6.33	Stable pH 6.32	Ending pH 6.05
	1005	4.037'	3.436'	1st Temp. 12.5	2nd Temp. 12.5	Stable Temp. 12.6	Ending Temp. 13.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-4	208.13'	208.58'	1st Cond. 3,830	2nd Cond. 4,030	Stable Cond. 4,110	Ending Cond. 4,280
4-8-15	Time	Bubbler Start	Bubbler End	1st pH 7.04	2nd pH 7.07	Stable pH 7.10	Ending pH 6.79
	1058	14.847'	14.420'	1st Temp. 13.5	2nd Temp. 13.6	Stable Temp. 13.2	Ending Temp. 13.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2	174.41'	175.19'	1st Cond. 2,950	2nd Cond. 3,060	Stable Cond. 3,120	Ending Cond. 3,140
4-8-15	Time	Bubbler Start	Bubbler End	1st pH 7.19	2nd pH 7.19	Stable pH 7.20	Ending pH 6.84
	1205	7.096'	6.346'	1st Temp. 13.2	2nd Temp. 13.3	Stable Temp. 13.0	Ending Temp. 13.1
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer			
7-Buffer			

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Cond. Standard Verification Check

STD. µS/cm Reading	Date/Time	Initial
1413 µS/cm		

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	EPA-2 DUPLICATE	175.19'	175.17'	1st Cond. 3,170	2nd Cond. 3,180	Stable Cond. 3,170	Ending Cond. 3,270
4-8-15	Time 1240	Bubbler Start 6.346'	Bubbler End 6.326'	1st pH 6.82	2nd pH 6.82	Stable pH 6.81	Ending pH 6.87
				1st Temp. 13.1	2nd Temp. 13.1	Stable Temp. 13.1	Ending Temp. 13.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	TWQ-142	202.74'	202.40'	1st Cond. 1,851	2nd Cond. 1,892	Stable Cond. 1,884	Ending Cond. 1,900
4-8-15	Time 1340	Bubbler Start 19.012'	Bubbler End 18.670	1st pH 7.64	2nd pH 7.61	Stable pH 7.60	Ending pH 7.80
				1st Temp. 13.8	2nd Temp. 13.7	Stable Temp. 13.5	Ending Temp. 13.9
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	RINSATE			1st Cond. 4	2nd Cond.	Stable Cond.	Ending Cond.
4-8-15	Time 1430	Bubbler Start	Bubbler End	1st pH 8.19	2nd pH	Stable pH	Ending pH
				1st Temp. 20.8	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	FIELD BLANK			1st Cond. 91	2nd Cond.	Stable Cond.	Ending Cond.
4-8-15	Time 1530	Bubbler Start	Bubbler End	1st pH 7.20	2nd pH	Stable pH	Ending pH
				1st Temp. 15.4	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.04	4-13-15/0820	[illegible]
7-Buffer	7.03	4-13-15/0819	[illegible]

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1442	4-13-15/0818	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	613	79.90'	81.00'	1st Cond. 8,610	2nd Cond. 8,850	Stable Cond. 8,960	Ending Cond. 8,910
	Time	Bubbler Start	Bubbler End	1st pH 3.05	2nd pH 3.04	Stable pH 3.04	Ending pH 3.07
	0840	4.919'	3.821'	1st Temp. 12.1	2nd Temp. 11.9	Stable Temp. 12.0	Ending Temp. 12.6
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	517	105.43'	111.30'	1st Cond. 5,040	2nd Cond. 5,330	Stable Cond. 5,500	Ending Cond. 5,500
	Time	Bubbler Start	Bubbler End	1st pH 2.87	2nd pH 2.87	Stable pH 2.86	Ending pH 2.86
	0930	1.214'	0.301'	1st Temp. 13.7	2nd Temp. 13.7	Stable Temp. 13.4	Ending Temp. 13.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	708	157.18'	158.15'	1st Cond. 4,760	2nd Cond. 5,270	Stable Cond. 5,440	Ending Cond. 5,440
	Time	Bubbler Start	Bubbler End	1st pH 2.85	2nd pH 2.84	Stable pH 2.84	Ending pH 2.84
	1055	1.375'	0.376'	1st Temp. 14.8	2nd Temp. 14.9	Stable Temp. 14.5	Ending Temp. 14.5
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	711	183.69'	185.00'	1st Cond. 4,750	2nd Cond. 4,810	Stable Cond. 4,770	Ending Cond. 4,470
	Time	Bubbler Start	Bubbler End	1st pH 3.12	2nd pH 3.09	Stable pH 3.09	Ending pH 4.66
	1240	8.441'	7.061'	1st Temp. 13.3	2nd Temp. 13.3	Stable Temp. 13.1	Ending Temp. 14.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	EPA-13	168.89'	170.04'	1st Cond. 5,550	2nd Cond. 5,730	Stable Cond. 5,930	Ending Cond. 6,050
	Time	Bubbler Start	Bubbler End	1st pH 6.48	2nd pH 6.50	Stable pH 6.51	Ending pH 5.92
	1310	2.841'	1.744'	1st Temp. 15.3	2nd Temp. 14.9	Stable Temp. 14.9	Ending Temp. 16.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	719	170.28'	170.61'	1st Cond. 4,860	2nd Cond. 4,920	Stable Cond. 5,040	Ending Cond. 5,080
	Time	Bubbler Start	Bubbler End	1st pH 5.07	2nd pH 5.07	Stable pH 5.06	Ending pH 5.05
	1405	0.335'	0.255'	1st Temp. 18.8	2nd Temp. 18.7	Stable Temp. 18.7	Ending Temp. 18.6
				Comments:			

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PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	4-14-15/0826	[illegible]
7-Buffer	7.03	4-14-15/0825	[illegible]

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1439	4-14-15/0827	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-13-15	420	155.55'	159.06'	1st Cond. 3,210	2nd Cond. 3,330	Stable Cond. 3,420	Ending Cond. 3,780
	Time	Bubbler Start	Bubbler End	1st pH 7.09	2nd pH 7.13	Stable pH 7.15	Ending pH 6.61
	1545	0.291'	0.319'	1st Temp. 15.7	2nd Temp. 15.5	Stable Temp. 15.1	Ending Temp. 15.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	EPA-14	124.73'	125.27'	1st Cond. 3,600	2nd Cond. 3,710	Stable Cond. 3,760	Ending Cond. 3,760
	Time	Bubbler Start	Bubbler End	1st pH 6.44	2nd pH 6.45	Stable pH 6.45	Ending pH 6.45
	0935	0.204'	0.151'	1st Temp. 13.4	2nd Temp. 13.5	Stable Temp. 13.3	Ending Temp. 13.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	717	133.26'	133.56'	1st Cond. 5,050	2nd Cond. 5,450	Stable Cond. 5,640	Ending Cond. 5,610
	Time	Bubbler Start	Bubbler End	1st pH 3.44	2nd pH 3.44	Stable pH 3.43	Ending pH 3.46
	1140	0.275'	0.286'	1st Temp. 14.5	2nd Temp. 14.0	Stable Temp. 13.9	Ending Temp. 14.2
				Comments: Sample is collected after pump screen is cleaned and internal parts checked.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	717 DUPLICATE	133.56'	133.60'	1st Cond. 5,800	2nd Cond. 5,760	Stable Cond. 5,800	Ending Cond. 5,660
	Time	Bubbler Start	Bubbler End	1st pH 3.45	2nd pH 3.45	Stable pH 3.45	Ending pH 3.45
	1215	0.286'	0.293'	1st Temp. 14.1	2nd Temp. 14.0	Stable Temp. 14.0	Ending Temp. 13.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	RINSATE			1st Cond. 90	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH 7.97	2nd pH	Stable pH	Ending pH
	1755			1st Temp. 24.1	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	FIELD BLANK			1st Cond. 90	2nd Cond.	Stable Cond.	Ending Cond.
	Time	Bubbler Start	Bubbler End	1st pH 8.24	2nd pH	Stable pH	Ending pH
	1800			1st Temp. 18.3	2nd Temp.	Stable Temp.	Ending Temp.
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.02	4-14-15/0826	[illegible]
7-Buffer	7.03	4-14-15/0825	[illegible]

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Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1439	4-14-15/0827	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NBL-2	167.71'	167.94'	1st Cond. 3,060	2nd Cond. 3,240	Stable Cond. 3,310	Ending Cond. 3,400
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 6.69	2nd pH 6.70	Stable pH 6.70	Ending pH 6.45
	1250	0.338'	0.349'	1st Temp. 14.1	2nd Temp. 14.1	Stable Temp. 14.0	Ending Temp. 13.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	MW-7	195.27'	195.27'	1st Cond. 3,500	2nd Cond. 3,560	Stable Cond. 3,660	Ending Cond. 3,750
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 7.56	2nd pH 7.57	Stable pH 7.58	Ending pH 6.48
	1310			1st Temp. 16.8	2nd Temp. 16.7	Stable Temp. 16.7	Ending Temp. 18.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-3	191.37'	191.33'	1st Cond. 4,080	2nd Cond.	Stable Cond.	Ending Cond.
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 6.18	2nd pH	Stable pH	Ending pH
	1445			1st Temp. 21.9	2nd Temp.	Stable Temp.	Ending Temp.
				Comments: Sample is collected entirely from discharge line purged out with nitrogen due to very low water volume (i.e. no discharge at surface port).			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	PB-4	190.35'	190.72'	1st Cond. 4,810	2nd Cond. 4,830	Stable Cond. 4,830	Ending Cond. 4,830
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 3.02	2nd pH 3.04	Stable pH 2.98	Ending pH 2.97
	1625			1st Temp. 19.0	2nd Temp. 18.8	Stable Temp. 18.7	Ending Temp. 18.7
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	MW-6	198.57'	198.63'	1st Cond. 4,330	2nd Cond.	Stable Cond.	Ending Cond.
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 6.86	2nd pH	Stable pH	Ending pH
	1735			1st Temp. 19.2	2nd Temp.	Stable Temp.	Ending Temp.
				Comments: Same condition as well PB-3.			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
	NW-1	198.60'		1st Cond. 2,450	2nd Cond. 3,840	Stable Cond. 3,870	Ending Cond. 3,890
4-14-15	Time	Bubbler Start	Bubbler End	1st pH 6.02	2nd pH 6.41	Stable pH 6.65	Ending pH 6.94
	1200			1st Temp. 11.0	2nd Temp. 10.9	Stable Temp. 10.9	Ending Temp. 10.8
				Comments:			

PH Standard Verification Check

STD.	PH Reading	Date/Time	Initial
4-Buffer	4.00	4-14-15/ 0832	[illegible]
7-Buffer	6.99	4-14-15/ 0830	[illegible]

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GROUND WATER MONITORING FIELD DATA SHEET

Second QUARTER 2015

SAMPLING

Cond. Standard Verification Check

STD. µS/cm	Reading	Date/Time	Initial
1413 µS/cm	1446	4-14-15/ 0831	[illegible]

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	NW-4	200.12'	200.56'	1st Cond. 3,980	2nd Cond. 4,280	Stable Cond. 4,270	Ending Cond. 4,250
	Time 1215	Bubbler Start	Bubbler End	1st pH 3.91	2nd pH 5.32	Stable pH 5.89	Ending pH 6.42
				1st Temp. 20.6	2nd Temp. 20.6	Stable Temp. 20.6	Ending Temp. 20.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	NW-2	197.32'	197.39'	1st Cond. 4,260	2nd Cond. 4,330	Stable Cond. 4,360	Ending Cond. 4,380
	Time 1236	Bubbler Start	Bubbler End	1st pH 6.77	2nd pH 6.55	Stable pH 6.41	Ending pH 6.27
				1st Temp. 15.2	2nd Temp. 15.2	Stable Temp. 15.2	Ending Temp. 15.3
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	NW-3	188.62'	188.77'	1st Cond. 4,370	2nd Cond. 4,000	Stable Cond. 4,060	Ending Cond. 4,110
	Time 1253	Bubbler Start	Bubbler End	1st pH 7.06	2nd pH 6.91	Stable pH 6.85	Ending pH 6.80
				1st Temp. 11.2	2nd Temp. 11.1	Stable Temp. 11.1	Ending Temp. 11.1
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	NW-5	188.43'	188.52'	1st Cond. 4,130	2nd Cond. 4,490	Stable Cond. 4,540	Ending Cond. 4,570
	Time 1307	Bubbler Start	Bubbler End	1st pH 6.87	2nd pH 6.72	Stable pH 6.63	Ending pH 6.44
				1st Temp. 12.4	2nd Temp. 12.4	Stable Temp. 12.3	Ending Temp. 12.4
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
4-14-15	RW-A	175.42'	175.75'	1st Cond. 4,150	2nd Cond. 4,400	Stable Cond. 4,430	Ending Cond. 4,460
	Time 1326	Bubbler Start	Bubbler End	1st pH 6.69	2nd pH 6.33	Stable pH 6.19	Ending pH 6.08
				1st Temp. 16.7	2nd Temp. 16.7	Stable Temp. 16.7	Ending Temp. 16.8
				Comments:			

Date	Well Number	WL w/Probe Pre-Sample	WL w/Probe Post Sample	Reading	Reading	Reading	Reading
				1st Cond.	2nd Cond.	Stable Cond.	Ending Cond.
				1st pH	2nd pH	Stable pH	Ending pH
				1st Temp.	2nd Temp.	Stable Temp.	Ending Temp.
	Time	Bubbler Start	Bubbler End	Comments:			

APPENDIX B

QUARTERLY SAMPLING

SEMI-ANNUAL GROUND WATER MONITORING REPORT

JANUARY TO JUNE OF 2015

QA/QC CONTROLS

FIELD BLANKS
RINSATES

EPA-28 AND EPA-28 DUPLICATES FOR SW ALLUVIUM

EPA-2 AND EPA-2 DUPLICATES FOR ZONE 1

717 AND 717 DUPLICATES FOR ZONE 3

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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-011
Client Sample ID: Field Blank

Report Date: 02/27/15
Collection Date: 01/07/15 15:00
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/09/15 16:32 / wc
Calcium	ND	mg/L		1		E200.7	01/12/15 18:36 / sf
Chloride	ND	mg/L		1		E300.0	01/09/15 23:13 / wc
Magnesium	ND	mg/L		1		E200.7	01/12/15 18:36 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:57 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/12/15 13:29 / lr
Potassium	ND	mg/L		1		E200.7	01/12/15 18:36 / sf
Sodium	1	mg/L		1		E200.7	01/12/15 18:36 / sf
Sulfate	ND	mg/L		1		E300.0	01/09/15 23:13 / wc
PHYSICAL PROPERTIES							
pH	5.10	s.u.	H	0.01		A4500-H B	01/09/15 13:25 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/09/15 12:46 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:09 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:09 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/14/15 14:09 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/14/15 14:09 / sf
Lead	ND	mg/L		0.001		E200.8	01/14/15 23:08 / clm
Manganese	ND	mg/L		0.01		E200.7	01/14/15 14:09 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:09 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:09 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/14/15 23:08 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:09 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 16:49 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:39 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.3	pCi/L	U			E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.4	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	0.09	pCi/L	U			E909.0	01/23/15 05:29 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 05:29 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 05:29 / eli-cs
Radium 226	-0.008	pCi/L	U			E903.0	01/26/15 11:42 / rdw
Radium 226 precision (±)	0.09	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/26/15 11:42 / rdw
Radium 228	0.97	pCi/L	U			RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.63	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.99	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.09	pCi/L	U			E908.0	01/19/15 15:54 / dmf
Thorium 230 precision (±)	0.09	pCi/L				E908.0	01/19/15 15:54 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/19/15 15:54 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-011
Client Sample ID: Field Blank

Report Date: 02/27/15
Collection Date: 01/07/15 15:00
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	31.2	%				A1030 E	01/16/15 07:34 / kbh
Anions	0.04	meq/L				A1030 E	01/16/15 07:34 / kbh
Cations	0.07	meq/L				A1030 E	01/16/15 07:34 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	3.82	ug/L		0.50		E624	01/14/15 20:52 / jlr
Bromoform	2.73	ug/L		0.50		E624	01/14/15 20:52 / jlr
Chlorodibromomethane	3.86	ug/L		0.50		E624	01/14/15 20:52 / jlr
Chloroform	6.12	ug/L		0.50		E624	01/14/15 20:52 / jlr
Trihalomethanes, Total	16.5	ug/L		0.50		E624	01/14/15 20:52 / jlr
Surr: 1,2-Dichlorobenzene-d4	121	%REC		73.7-126		E624	01/14/15 20:52 / jlr
Surr: Dibromofluoromethane	122	%REC		64.4-131		E624	01/14/15 20:52 / jlr
Surr: p-Bromofluorobenzene	119	%REC		67.1-133		E624	01/14/15 20:52 / jlr
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	01/14/15 20:52 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-013
Client Sample ID: Field Blank

Report Date: 02/27/15
Collection Date: 01/13/15 16:00
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 20:44 / wc
Calcium	ND	mg/L		1		E200.7	01/21/15 19:50 / sf
Chloride	ND	mg/L		1		E300.0	01/20/15 14:11 / wc
Magnesium	ND	mg/L		1		E200.7	01/21/15 19:50 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 12:37 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:51 / lr
Potassium	ND	mg/L		1		E200.7	01/21/15 19:50 / sf
Sodium	ND	mg/L		1		E200.7	01/21/15 19:50 / sf
Sulfate	ND	mg/L		1		E300.0	01/20/15 14:11 / wc
PHYSICAL PROPERTIES							
pH	5.22	s.u.	H	0.01		A4500-H B	01/19/15 13:07 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/19/15 08:56 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/21/15 18:06 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/21/15 18:06 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/21/15 18:06 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/21/15 18:06 / sf
Lead	ND	mg/L		0.001		E200.8	01/21/15 17:05 / clm
Manganese	ND	mg/L		0.01		E200.7	01/21/15 18:06 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 18:06 / sf
Nickel	ND	mg/L		0.05		E200.8	01/21/15 17:05 / clm
Uranium	ND	mg/L		0.0003		E200.8	01/21/15 17:05 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 18:06 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 17:07 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:52 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.2	pCi/L	U			E900.1	02/23/15 21:58 / plj
Gross Alpha minus Rn & U Precision (±)	1.3	pCi/L				E900.1	02/23/15 21:58 / plj
Gross Alpha minus Rn & U MDC	2.2	pCi/L				E900.1	02/23/15 21:58 / plj
Lead 210	-0.08	pCi/L	U			E909.0	02/07/15 13:43 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 13:43 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 13:43 / eli-cs
Radium 226	0.31	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 226 MDC	0.21	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 228	0.02	pCi/L	U			RA-05	02/26/15 14:07 / plj
Radium 228 precision (±)	0.72	pCi/L				RA-05	02/26/15 14:07 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	02/26/15 14:07 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at *minimum detectable concentration*
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-013
Client Sample ID: Field Blank

Report Date: 02/27/15
Collection Date: 01/13/15 16:00
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.04	pCi/L	U			E908.0	02/02/15 10:00 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	02/02/15 10:00 / dmf
Thorium 230 MDC	0.08	pCi/L				E908.0	02/02/15 10:00 / dmf
DATA QUALITY							
A/C Balance (± 5)	-3.87	%				A1030 E	02/23/15 15:27 / kbh
Anions	0.03	meq/L				A1030 E	02/23/15 15:27 / kbh
Cations	0.03	meq/L				A1030 E	02/23/15 15:27 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	4.96	ug/L		0.50		E624	01/17/15 03:27 / jlr
Bromoform	2.19	ug/L		0.50		E624	01/17/15 03:27 / jlr
Chlorodibromomethane	3.70	ug/L		0.50		E624	01/17/15 03:27 / jlr
Chloroform	9.24	ug/L		0.50		E624	01/17/15 03:27 / jlr
Trihalomethanes, Total	20.1	ug/L		0.50		E624	01/17/15 03:27 / jlr
Surr: 1,2-Dichlorobenzene-d4	121	%REC		73.7-126		E624	01/17/15 03:27 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/17/15 03:27 / jlr
Surr: p-Bromofluorobenzene	120	%REC		67.1-133		E624	01/17/15 03:27 / jlr
Surr: Toluene-d8	98.0	%REC		79.7-125		E624	01/17/15 03:27 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 5.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-011
Client Sample ID: Field Blank

Report Date: 05/19/15
Collection Date: 04/08/15 15:30
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	40	mg/L		5		A2320 B	04/10/15 20:56 / wc
Calcium	ND	mg/L		1		E200.7	04/13/15 22:14 / sf
Chloride	7	mg/L		1		E300.0	04/13/15 15:50 / wc
Magnesium	ND	mg/L		1		E200.7	04/13/15 22:14 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:08 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/14/15 13:25 / lr
Potassium	ND	mg/L		1		E200.7	04/13/15 22:14 / sf
Sodium	20	mg/L		1		E200.7	04/13/15 22:14 / sf
Sulfate	3	mg/L		1		E300.0	04/15/15 01:56 / wc
PHYSICAL PROPERTIES							
pH	7.65	s.u.	H	0.01		A4500-H B	04/13/15 09:51 / lmc
Solids, Total Dissolved TDS @ 180 C	59	mg/L		10		A2540 C	04/13/15 10:14 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 16:35 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 16:35 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/15/15 16:35 / sf
Cobalt	ND	mg/L		0.01		E200.7	04/15/15 16:35 / sf
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:46 / smm
Manganese	ND	mg/L		0.01		E200.7	04/15/15 16:35 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 16:35 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 16:35 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/16/15 17:46 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 16:35 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 19:35 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:14 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.4	pCi/L	U			E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U Precision (±)	1	pCi/L				E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:16 / trs
Lead 210	-0.02	pCi/L	U			E909.0	04/25/15 04:15 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/25/15 04:15 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/25/15 04:15 / eli-cs
Radium 226	0.21	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.13	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.17	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	-0.1	pCi/L	U			RA-05	04/17/15 11:21 / plj
Radium 228 precision (±)	0.84	pCi/L				RA-05	04/17/15 11:21 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/17/15 11:21 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-011
Client Sample ID: Field Blank

Report Date: 05/19/15
Collection Date: 04/08/15 15:30
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.004	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.23	%				A1030 E	04/20/15 07:49 / kbh
Anions	0.93	meq/L				A1030 E	04/20/15 07:49 / kbh
Cations	0.89	meq/L				A1030 E	04/20/15 07:49 / kbh
Solids, Total Dissolved Calculated	60	mg/L				A1030 E	04/20/15 07:49 / kbh
TDS Balance (0.80 - 1.20)	0.98					A1030 E	04/20/15 07:49 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	2.56	ug/L		0.50		E624	04/13/15 17:15 / jlr
Bromoform	3.40	ug/L		0.50		E624	04/13/15 17:15 / jlr
Chlorodibromomethane	3.38	ug/L		0.50		E624	04/13/15 17:15 / jlr
Chloroform	2.99	ug/L		0.50		E624	04/13/15 17:15 / jlr
Trihalomethanes, Total	12.3	ug/L		0.50		E624	04/13/15 17:15 / jlr
Surr: 1,2-Dichlorobenzene-d4	111	%REC		73.7-126		E624	04/13/15 17:15 / jlr
Surr: Dibromofluoromethane	108	%REC		64.4-131		E624	04/13/15 17:15 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/13/15 17:15 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/13/15 17:15 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-013
Client Sample ID: Field Blank

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 18:00
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	37	mg/L		5		A2320 B	04/20/15 17:25 / wc
Calcium	ND	mg/L		1		E200.7	04/21/15 17:38 / sf
Chloride	8	mg/L		1		E300.0	04/22/15 00:35 / wc
Magnesium	ND	mg/L		1		E200.7	04/21/15 17:38 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/21/15 13:13 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 12:51 / lr
Potassium	ND	mg/L		1		E200.7	04/22/15 16:28 / sf
Sodium	20	mg/L		1		E200.7	04/21/15 17:38 / sf
Sulfate	3	mg/L		1		E300.0	04/22/15 00:35 / wc
PHYSICAL PROPERTIES							
pH	7.94	s.u.	H	0.01		A4500-H B	04/20/15 14:35 / lmc
Solids, Total Dissolved TDS @ 180 C	58	mg/L		10		A2540 C	04/20/15 09:51 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/21/15 19:15 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/21/15 19:15 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 19:15 / sf
Cobalt	ND	mg/L		0.01		E200.8	04/22/15 00:29 / clm
Lead	ND	mg/L		0.001		E200.8	04/22/15 00:29 / clm
Manganese	ND	mg/L		0.01		E200.7	04/21/15 19:15 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 19:15 / sf
Nickel	ND	mg/L		0.05		E200.7	04/21/15 19:15 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/22/15 00:29 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 19:15 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/15 14:55 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:23 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	0.8	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	-0.9	pCi/L	U			E909.0	05/05/15 18:53 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	05/05/15 18:53 / eli-cs
Lead 210 MDC	1.6	pCi/L				E909.0	05/05/15 18:53 / eli-cs
Radium 226	0.03	pCi/L	U			E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	0.09	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	-0.7	pCi/L	U			RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	0.81	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-013
Client Sample ID: Field Blank

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 18:00
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.2	pCi/L				E908.0	05/08/15 09:59 / cng
Thorium 230 precision (±)	0.2	pCi/L				E908.0	05/08/15 09:59 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	05/08/15 09:59 / cng
- See Case Narrative regarding Pb210 analysis.							
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.30	%				A1030 E	04/24/15 10:57 / kbh
Anions	0.89	meq/L				A1030 E	04/24/15 10:57 / kbh
Cations	0.88	meq/L				A1030 E	04/24/15 10:57 / kbh
Solids, Total Dissolved Calculated	58	mg/L				A1030 E	04/24/15 10:57 / kbh
TDS Balance (0.80 - 1.20)	1.00					A1030 E	04/24/15 10:57 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	2.38	ug/L		0.50		E624	04/21/15 00:25 / jlr
Bromoform	3.41	ug/L		0.50		E624	04/21/15 00:25 / jlr
Chlorodibromomethane	3.42	ug/L		0.50		E624	04/21/15 00:25 / jlr
Chloroform	2.74	ug/L		0.50		E624	04/21/15 00:25 / jlr
Trihalomethanes, Total	12.0	ug/L		0.50		E624	04/21/15 00:25 / jlr
Surr: 1,2-Dichlorobenzene-d4	113	%REC		73.7-126		E624	04/21/15 00:25 / jlr
Surr: Dibromofluoromethane	110	%REC		64.4-131		E624	04/21/15 00:25 / jlr
Surr: p-Bromofluorobenzene	115	%REC		67.1-133		E624	04/21/15 00:25 / jlr
Surr: Toluene-d8	100	%REC		79.7-125		E624	04/21/15 00:25 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-010
Client Sample ID: Rinsate

Report Date: 02/27/15
Collection Date: 01/07/15 14:50
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/09/15 16:26 / wc
Calcium	ND	mg/L		1		E200.7	01/12/15 18:32 / sf
Chloride	ND	mg/L		1		E300.0	01/09/15 22:58 / wc
Magnesium	ND	mg/L		1		E200.7	01/12/15 18:32 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 13:55 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/12/15 13:26 / lr
Potassium	ND	mg/L		1		E200.7	01/12/15 18:32 / sf
Sodium	ND	mg/L		1		E200.7	01/12/15 18:32 / sf
Sulfate	ND	mg/L		1		E300.0	01/09/15 22:58 / wc
PHYSICAL PROPERTIES							
pH	5.94	s.u.	H	0.01		A4500-H B	01/09/15 13:22 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/09/15 12:45 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 14:05 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 14:05 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/14/15 14:05 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/14/15 14:05 / sf
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:50 / clm
Manganese	ND	mg/L		0.01		E200.7	01/14/15 14:05 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 14:05 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 14:05 / sf
Uranium	ND	mg/L		0.0003		E200.8	01/14/15 22:50 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 14:05 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 16:13 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:38 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.2	pCi/L	U			E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.3	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	0.2	pCi/L	U			E909.0	01/23/15 04:19 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 04:19 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 04:19 / eli-cs
Radium 226	0.04	pCi/L	U			E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.10	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	0.75	pCi/L	U			RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	0.64	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	1.0	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.1	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-010
Client Sample ID: Rinsate

Report Date: 02/27/15
Collection Date: 01/07/15 14:50
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	10.6	%				A1030 E	01/16/15 07:34 / kbh
Anions	0.03	meq/L				A1030 E	01/16/15 07:34 / kbh
Cations	0.04	meq/L				A1030 E	01/16/15 07:34 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	4.16	ug/L		0.50		E624	01/14/15 20:17 / jlr
Bromoform	2.87	ug/L		0.50		E624	01/14/15 20:17 / jlr
Chlorodibromomethane	4.00	ug/L		0.50		E624	01/14/15 20:17 / jlr
Chloroform	6.68	ug/L		0.50		E624	01/14/15 20:17 / jlr
Trihalomethanes, Total	17.7	ug/L		0.50		E624	01/14/15 20:17 / jlr
Surr: 1,2-Dichlorobenzene-d4	124	%REC		73.7-126		E624	01/14/15 20:17 / jlr
Surr: Dibromofluoromethane	126	%REC		64.4-131		E624	01/14/15 20:17 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/14/15 20:17 / jlr
Surr: Toluene-d8	97.0	%REC		79.7-125		E624	01/14/15 20:17 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-012
Client Sample ID: Rinsate

Report Date: 02/27/15
Collection Date: 01/13/15 15:25
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 20:38 / wc
Calcium	ND	mg/L		1		E200.7	01/21/15 19:46 / sf
Chloride	ND	mg/L		1		E300.0	01/20/15 13:53 / wc
Magnesium	ND	mg/L		1		E200.7	01/21/15 19:46 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/21/15 12:35 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/16/15 15:49 / lr
Potassium	ND	mg/L		1		E200.7	01/21/15 19:46 / sf
Sodium	ND	mg/L		1		E200.7	01/21/15 19:46 / sf
Sulfate	ND	mg/L		1		E300.0	01/20/15 13:53 / wc
PHYSICAL PROPERTIES							
pH	5.45	s.u.	H	0.01		A4500-H B	01/19/15 13:04 / alp
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	01/19/15 08:54 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/21/15 17:23 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/21/15 17:23 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/21/15 17:23 / sf
Cobalt	ND	mg/L		0.01		E200.7	01/21/15 17:23 / sf
Lead	ND	mg/L		0.001		E200.8	01/21/15 17:02 / clm
Manganese	ND	mg/L		0.01		E200.7	01/21/15 17:23 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 17:23 / sf
Nickel	ND	mg/L		0.05		E200.8	01/21/15 17:02 / clm
Uranium	ND	mg/L		0.0003		E200.8	01/21/15 17:02 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 17:23 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 16:55 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:47 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	-0.8	pCi/L	U			E900.1	02/23/15 21:58 / plj
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	02/23/15 21:58 / plj
Gross Alpha minus Rn & U MDC	2.2	pCi/L				E900.1	02/23/15 21:58 / plj
Lead 210	-0.05	pCi/L	U			E909.0	02/07/15 12:01 / eli-cs
Lead 210 precision (±)	0.6	pCi/L				E909.0	02/07/15 12:01 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 12:01 / eli-cs
Radium 226	0.11	pCi/L	U			E903.0	01/27/15 08:57 / trs
Radium 226 precision (±)	0.10	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 226 MDC	0.15	pCi/L				E903.0	01/27/15 08:57 / trs
Radium 228	0.68	pCi/L	U			RA-05	02/26/15 14:07 / plj
Radium 228 precision (±)	0.81	pCi/L				RA-05	02/26/15 14:07 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	02/26/15 14:07 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-012
Client Sample ID: Rinsate

Report Date: 02/27/15
Collection Date: 01/13/15 15:25
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.09	pCi/L				E908.0	02/02/15 10:00 / dmf
Thorium 230 precision (±)	0.06	pCi/L				E908.0	02/02/15 10:00 / dmf
Thorium 230 MDC	0.08	pCi/L				E908.0	02/02/15 10:00 / dmf
DATA QUALITY							
A/C Balance (± 5)	-25.5	%				A1030 E	01/26/15 09:06 / kbh
Anions	0.05	meq/L				A1030 E	01/26/15 09:06 / kbh
Cations	0.03	meq/L				A1030 E	01/26/15 09:06 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	3.38	ug/L		0.50		E624	01/17/15 02:52 / jlr
Bromoform	2.54	ug/L		0.50		E624	01/17/15 02:52 / jlr
Chlorodibromomethane	3.51	ug/L		0.50		E624	01/17/15 02:52 / jlr
Chloroform	4.68	ug/L		0.50		E624	01/17/15 02:52 / jlr
Trihalomethanes, Total	14.1	ug/L		0.50		E624	01/17/15 02:52 / jlr
Surr: 1,2-Dichlorobenzene-d4	123	%REC		73.7-126		E624	01/17/15 02:52 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	01/17/15 02:52 / jlr
Surr: p-Bromofluorobenzene	121	%REC		67.1-133		E624	01/17/15 02:52 / jlr
Surr: Toluene-d8	96.0	%REC		79.7-125		E624	01/17/15 02:52 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 5.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-010
Client Sample ID: Rinsate

Report Date: 05/19/15
Collection Date: 04/08/15 14:30
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/10/15 20:48 / wc
Calcium	ND	mg/L		1		E200.7	04/13/15 22:10 / sf
Chloride	1	mg/L		1		E300.0	04/13/15 15:33 / wc
Magnesium	ND	mg/L		1		E200.7	04/13/15 22:10 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/13/15 13:06 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/14/15 13:22 / lr
Potassium	ND	mg/L		1		E200.7	04/13/15 22:10 / sf
Sodium	3	mg/L		1		E200.7	04/13/15 22:10 / sf
Sulfate	5	mg/L		1		E300.0	04/15/15 01:38 / wc
PHYSICAL PROPERTIES							
pH	6.57	s.u.	H	0.01		A4500-H B	04/13/15 09:44 / lmc
Solids, Total Dissolved TDS @ 180 C	20	mg/L		10		A2540 C	04/13/15 10:13 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 16:31 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 16:31 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/15/15 16:31 / sf
Cobalt	ND	mg/L		0.01		E200.7	04/15/15 16:31 / sf
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:43 / smm
Manganese	ND	mg/L		0.01		E200.7	04/15/15 16:31 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 16:31 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 16:31 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/16/15 17:43 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 16:31 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/28/15 18:59 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:11 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	0.6	pCi/L	U			E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.1	pCi/L				E900.1	04/15/15 21:16 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 21:16 / trs
Lead 210	-0.3	pCi/L	U			E909.0	04/25/15 02:32 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/25/15 02:32 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/25/15 02:32 / eli-cs
Radium 226	0.13	pCi/L	U			E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.12	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.17	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	1.1	pCi/L	U			RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	0.90	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-010
Client Sample ID: Rinsate

Report Date: 05/19/15
Collection Date: 04/08/15 14:30
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.03	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.1	pCi/L				E908.0	04/17/15 10:24 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-11.5	%				A1030 E	04/20/15 07:48 / kbh
Anions	0.21	meq/L				A1030 E	04/20/15 07:48 / kbh
Cations	0.17	meq/L				A1030 E	04/20/15 07:48 / kbh
Solids, Total Dissolved Calculated	17	mg/L				A1030 E	04/20/15 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.18					A1030 E	04/20/15 07:48 / kbh
- The ion balance is not appropriate for samples having a conductivity less than 300 umhos/cm.							
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.51	ug/L		0.50		E624	04/13/15 16:40 / jlr
Bromoform	1.30	ug/L		0.50		E624	04/13/15 16:40 / jlr
Chlorodibromomethane	1.60	ug/L		0.50		E624	04/13/15 16:40 / jlr
Chloroform	1.52	ug/L		0.50		E624	04/13/15 16:40 / jlr
Trihalomethanes, Total	5.93	ug/L		0.50		E624	04/13/15 16:40 / jlr
Surr: 1,2-Dichlorobenzene-d4	109	%REC		73.7-126		E624	04/13/15 16:40 / jlr
Surr: Dibromofluoromethane	102	%REC		64.4-131		E624	04/13/15 16:40 / jlr
Surr: p-Bromofluorobenzene	113	%REC		67.1-133		E624	04/13/15 16:40 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/13/15 16:40 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-012
Client Sample ID: Rinsate

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 17:55
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	37	mg/L		5		A2320 B	04/20/15 17:18 / wc
Calcium	ND	mg/L		1		E200.7	04/21/15 17:27 / sf
Chloride	8	mg/L		1		E300.0	04/22/15 00:18 / wc
Magnesium	ND	mg/L		1		E200.7	04/21/15 17:27 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/21/15 13:12 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/20/15 14:51 / lr
Potassium	ND	mg/L		1		E200.7	04/22/15 16:24 / sf
Sodium	20	mg/L		1		E200.7	04/21/15 17:27 / sf
Sulfate	3	mg/L		1		E300.0	04/22/15 00:18 / wc
PHYSICAL PROPERTIES							
pH	7.84	s.u.	H	0.01		A4500-H B	04/20/15 14:25 / lmc
Solids, Total Dissolved TDS @ 180 C	50	mg/L		10		A2540 C	04/20/15 09:50 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/21/15 19:11 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/21/15 19:11 / sf
Cadmium	ND	mg/L		0.005		E200.7	04/21/15 19:11 / sf
Cobalt	ND	mg/L		0.01		E200.8	04/22/15 00:26 / clm
Lead	ND	mg/L		0.001		E200.8	04/22/15 00:26 / clm
Manganese	ND	mg/L		0.01		E200.7	04/21/15 19:11 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 19:11 / sf
Nickel	ND	mg/L		0.05		E200.7	04/21/15 19:11 / sf
Uranium	ND	mg/L		0.0003		E200.8	04/22/15 00:26 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 19:11 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/01/15 14:43 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:18 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.7	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	0.9	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	-0.04	pCi/L	U			E909.0	05/05/15 17:11 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	05/05/15 17:11 / eli-cs
Lead 210 MDC	1.6	pCi/L				E909.0	05/05/15 17:11 / eli-cs
Radium 226	0.05	pCi/L	U			E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	0.09	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.15	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	0.21	pCi/L	U			RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	0.87	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-012
Client Sample ID: Rinsate

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 17:55
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.002	pCi/L	U			E908.0	05/08/15 09:59 / cng
Thorium 230 precision (±)	0.09	pCi/L				E908.0	05/08/15 09:59 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	05/08/15 09:59 / cng
- See Case Narrative regarding Pb210 analysis.							
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-2.03	%				A1030 E	04/24/15 10:56 / kbh
Anions	0.91	meq/L				A1030 E	04/24/15 10:56 / kbh
Cations	0.87	meq/L				A1030 E	04/24/15 10:56 / kbh
Solids, Total Dissolved Calculated	59	mg/L				A1030 E	04/24/15 10:56 / kbh
TDS Balance (0.80 - 1.20)	0.85					A1030 E	04/24/15 10:56 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	1.62	ug/L		0.50		E624	04/20/15 23:50 / jlr
Bromoform	2.51	ug/L		0.50		E624	04/20/15 23:50 / jlr
Chlorodibromomethane	2.51	ug/L		0.50		E624	04/20/15 23:50 / jlr
Chloroform	1.86	ug/L		0.50		E624	04/20/15 23:50 / jlr
Trihalomethanes, Total	8.50	ug/L		0.50		E624	04/20/15 23:50 / jlr
Surr: 1,2-Dichlorobenzene-d4	113	%REC		73.7-126		E624	04/20/15 23:50 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	04/20/15 23:50 / jlr
Surr: p-Bromofluorobenzene	112	%REC		67.1-133		E624	04/20/15 23:50 / jlr
Surr: Toluene-d8	102	%REC		79.7-125		E624	04/20/15 23:50 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 6.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28	EPA-28	EPA-28	EPA-28
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-010	C15010153-010	C14100513-010	C14070373-010
Bicarbonate as HCO3	mg/L	715	437	724	777
Calcium	mg/L	526	500	498	534
Chloride	mg/L	129	100	117	114
Magnesium	mg/L	480	462	461	462
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	12.7	12	23	26
Potassium	mg/L	11	11	11	12
Sodium	mg/L	227	255	231	221
Sulfate	mg/L	3020	2930	2920	2840
pH	s.u.	6.78	6.87	6.84	6.86
Solids, Total Dissolved TDS @ 180 C	mg/L	5090	5020	5010	5010
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.74	0.15	0.72	0.79
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0403	0.0279	0.0452	0.0388
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.4 *	1.7 *	1	0.3
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.4	1.3	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	0.5	0.8	0.5	1.1
Lead 210 precision (±)	pCi/L	0.8	0.9	0.8	0.8
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.71	0.66	0.64	0.48
Radium 226 precision (±)	pCi/L	0.20	0.19	0.20	0.15
Radium 226 MDC	pCi/L	0.20	0.19	0.19	0.15
Radium 228	pCi/L	1.4	0.65	1.2	0.93
Radium 228 precision (±)	pCi/L	0.89	0.90	1.0	0.73
Radium 228 MDC	pCi/L	1.0	1.5	1.6	1.1
Thorium 230	pCi/L	0.04	-0.004	0.01	0.04
Thorium 230 precision (±)	pCi/L	0.08	0.04	0.06	0.07
Thorium 230 MDC	pCi/L	0.2	0.1	0.1	0.2
A/C Balance (± 5)	%	-2.32	1.82	-2.97	-1.40
Anions	meq/L	79.5	71.7	77.6	76.7
Cations	meq/L	75.9	74.4	73.1	74.6
Solids, Total Dissolved Calculated	mg/L	4800	4500	4700	4700
TDS Balance (0.80 - 1.20)		1.05	1.11	1.06	1.07
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Alluvium Monitor Wells					
Well ID:		EPA-28 Duplicate	EPA-28 Duplicate	EPA-28 Duplicate	EPA-28 Duplicate
Collection Date:		4/6/2015	1/5/2015	10/6/2014	7/7/2014
Receive Date:		4/9/2015	1/8/2015	10/9/2014	7/10/2014
Report Date:		5/18/2015	2/27/2015	11/19/2014	8/28/2014
Analyte	RUnits	C15040322-011	C15010153-011	C14100513-011	C14070373-011
Bicarbonate as HCO3	mg/L	588	455	619	612
Calcium	mg/L	514	500	514	504
Chloride	mg/L	123	102	109	107
Magnesium	mg/L	477	456	482	440
Nitrogen, Ammonia as N	mg/L	ND(0.05)	ND(0.05)	0.05	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	17	14	19	19
Potassium	mg/L	11	11	11	11
Sodium	mg/L	238	247	238	237
Sulfate	mg/L	3090	2910	2940	2900
pH	s.u.	6.81	6.88	6.80	6.85
Solids, Total Dissolved TDS @ 180 C	mg/L	5070	5030	5090	4960
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	0.63	0.54	0.64	0.62
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0308	0.0256	0.0355	0.0285
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	3.9 *	3.1 *	0.8	0.2
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.7	1.6	0.4	0.3
Gross Alpha minus Rn & U MDC	pCi/L	1.6	1.8	0.5	0.5
Lead 210	pCi/L	-0.08	0.7	0.3	0.6
Lead 210 precision (±)	pCi/L	0.7	0.9	0.8	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.3	1.2
Radium 226	pCi/L	0.78	0.52	0.55	0.64
Radium 226 precision (±)	pCi/L	0.20	0.17	0.19	0.17
Radium 226 MDC	pCi/L	0.20	0.17	0.20	0.16
Radium 228	pCi/L	0.95	0.76	1.5	0.21
Radium 228 precision (±)	pCi/L	0.78	0.85	1.1	0.84
Radium 228 MDC	pCi/L	1.2	1.3	1.7	1.4
Thorium 230	pCi/L	-0.01	0.04	-0.03	0.007
Thorium 230 precision (±)	pCi/L	0.06	0.07	0.06	0.05
Thorium 230 MDC	pCi/L	0.2	0.2	0.2	0.1
A/C Balance (± 5)	%	-1.85	1.16	0.22	-1.85
Anions	meq/L	78.4	71.8	75.6	74.7
Cations	meq/L	75.6	73.5	76.0	72.0
Solids, Total Dissolved Calculated	mg/L	4800	4500	4700	4600
TDS Balance (0.80 - 1.20)		1.05	1.11	1.09	1.08
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-011
Client Sample ID: EPA-28 Duplicate

Report Date: 02/27/15
Collection Date: 01/05/15 16:40
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	455	mg/L		5		A2320 B	01/08/15 20:23 / wc
Calcium	500	mg/L		1		E200.7	01/09/15 16:02 / sf
Chloride	102	mg/L	D	2		E300.0	01/09/15 10:17 / wc
Magnesium	456	mg/L		1		E200.7	01/09/15 16:02 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	01/14/15 14:25 / lr
Nitrogen, Nitrate+Nitrite as N	14	mg/L	D	1		E353.2	01/12/15 12:46 / lr
Potassium	11	mg/L		1		E200.7	01/09/15 16:02 / sf
Sodium	247	mg/L		1		E200.7	01/09/15 16:02 / sf
Sulfate	2910	mg/L	D	8		E300.0	01/09/15 10:17 / wc
PHYSICAL PROPERTIES							
pH	6.88	s.u.	H	0.01		A4500-H B	01/08/15 15:14 / alp
Solids, Total Dissolved TDS @ 180 C	5030	mg/L		40		A2540 C	01/08/15 14:56 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.8	01/13/15 01:42 / clm
Beryllium	ND	mg/L		0.001		E200.8	01/15/15 18:55 / clm
Cadmium	ND	mg/L		0.005		E200.8	01/13/15 01:42 / clm
Cobalt	ND	mg/L		0.01		E200.8	01/13/15 01:42 / clm
Lead	ND	mg/L		0.001		E200.8	01/13/15 01:42 / clm
Manganese	0.54	mg/L		0.01		E200.8	01/13/15 01:42 / clm
Molybdenum	ND	mg/L		0.1		E200.8	01/13/15 01:42 / clm
Nickel	ND	mg/L		0.05		E200.8	01/13/15 01:42 / clm
Uranium	0.0256	mg/L		0.0003		E200.8	01/13/15 01:42 / clm
Vanadium	ND	mg/L		0.1		E200.8	01/13/15 01:42 / clm
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 13:23 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	01/23/15 11:23 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.1	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	01/14/15 20:37 / dmf
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	01/14/15 20:37 / dmf
Lead 210	0.7	pCi/L	U			E909.0	01/22/15 07:30 / eli-cs
Lead 210 precision (±)	0.9	pCi/L				E909.0	01/22/15 07:30 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/22/15 07:30 / eli-cs
Radium 226	0.52	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 precision (±)	0.17	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 226 MDC	0.17	pCi/L				E903.0	01/19/15 11:41 / rdw
Radium 228	0.76	pCi/L	U			RA-05	01/14/15 12:23 / rdw
Radium 228 precision (±)	0.85	pCi/L				RA-05	01/14/15 12:23 / rdw
Radium 228 MDC	1.3	pCi/L				RA-05	01/14/15 12:23 / rdw
Thorium 230	0.04	pCi/L	U			E908.0	01/20/15 09:29 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/20/15 09:29 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	01/20/15 09:29 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15010153-011
Client Sample ID: EPA-28 Duplicate

Report Date: 02/27/15
Collection Date: 01/05/15 16:40
DateReceived: 01/08/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	1.16	%				A1030 E	01/13/15 07:09 / kbh
Anions	71.8	meq/L				A1030 E	01/13/15 07:09 / kbh
Cations	73.5	meq/L				A1030 E	01/13/15 07:09 / kbh
Solids, Total Dissolved Calculated	4500	mg/L				A1030 E	01/13/15 07:09 / kbh
TDS Balance (0.80 - 1.20)	1.11					A1030 E	01/13/15 07:09 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/09/15 08:21 / jlr
Bromoform	ND	ug/L		0.50		E624	01/09/15 08:21 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/09/15 08:21 / jlr
Chloroform	ND	ug/L		0.50		E624	01/09/15 08:21 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/09/15 08:21 / jlr
Surr: 1,2-Dichlorobenzene-d4	105	%REC		73.7-126		E624	01/09/15 08:21 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	01/09/15 08:21 / jlr
Surr: p-Bromofluorobenzene	104	%REC		67.1-133		E624	01/09/15 08:21 / jlr
Surr: Toluene-d8	104	%REC		79.7-125		E624	01/09/15 08:21 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-011
Client Sample ID: EPA-28 Duplicate

Report Date: 05/18/15
Collection Date: 04/06/15 17:00
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	588	mg/L		5		A2320 B	04/10/15 18:47 / wc
Calcium	514	mg/L		1		E200.7	04/13/15 20:30 / sf
Chloride	123	mg/L	D	2		E300.0	04/14/15 00:40 / wc
Magnesium	477	mg/L		1		E200.7	04/13/15 20:30 / sf
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	04/10/15 16:06 / lr
Nitrogen, Nitrate+Nitrite as N	17	mg/L	D	1		E353.2	04/14/15 12:42 / lr
Potassium	11	mg/L		1		E200.7	04/13/15 20:30 / sf
Sodium	238	mg/L		1		E200.7	04/13/15 20:30 / sf
Sulfate	3090	mg/L	D	8		E300.0	04/14/15 00:40 / wc
PHYSICAL PROPERTIES							
pH	6.81	s.u.	H	0.01		A4500-H B	04/10/15 12:39 / lmc
Solids, Total Dissolved TDS @ 180 C	5070	mg/L		40		A2540 C	04/10/15 12:45 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 23:28 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 23:28 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 23:32 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 23:32 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 23:32 / smm
Manganese	0.63	mg/L		0.01		E200.7	04/15/15 23:28 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 23:28 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 23:28 / sf
Uranium	0.0308	mg/L		0.0003		E200.8	04/16/15 23:32 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 23:28 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 17:38 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	04/23/15 15:06 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	3.9	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U Precision (±)	1.7	pCi/L				E900.1	04/15/15 13:17 / trs
Gross Alpha minus Rn & U MDC	1.6	pCi/L				E900.1	04/15/15 13:17 / trs
Lead 210	-0.08	pCi/L	U			E909.0	04/23/15 10:17 / eli-cs
Lead 210 precision (±)	0.7	pCi/L				E909.0	04/23/15 10:17 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/23/15 10:17 / eli-cs
Radium 226	0.78	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 precision (±)	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 226 MDC	0.20	pCi/L				E903.0	04/21/15 07:28 / dmf
Radium 228	0.95	pCi/L	U			RA-05	04/16/15 11:03 / plj
Radium 228 precision (±)	0.78	pCi/L				RA-05	04/16/15 11:03 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	04/16/15 11:03 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium
Lab ID: C15040322-011
Client Sample ID: EPA-28 Duplicate

Report Date: 05/18/15
Collection Date: 04/06/15 17:00
DateReceived: 04/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	-0.01	pCi/L	U			E908.0	04/16/15 14:20 / cng
Thorium 230 precision (±)	0.06	pCi/L				E908.0	04/16/15 14:20 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/16/15 14:20 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-1.85	%				A1030 E	04/15/15 09:05 / kbh
Anions	78.4	meq/L				A1030 E	04/15/15 09:05 / kbh
Cations	75.6	meq/L				A1030 E	04/15/15 09:05 / kbh
Solids, Total Dissolved Calculated	4800	mg/L				A1030 E	04/15/15 09:05 / kbh
TDS Balance (0.80 - 1.20)	1.05					A1030 E	04/15/15 09:05 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 03:46 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 03:46 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 03:46 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 03:46 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 03:46 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	04/14/15 03:46 / jlr
Surr: Dibromofluoromethane	112	%REC		64.4-131		E624	04/14/15 03:46 / jlr
Surr: p-Bromofluorobenzene	99.0	%REC		67.1-133		E624	04/14/15 03:46 / jlr
Surr: Toluene-d8	109	%REC		79.7-125		E624	04/14/15 03:46 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations

GroundWater Monitoring Summary: Zone 1 Monitor Wells

Well ID:		EPA-2	EPA-2	EPA-2	EPA-2
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-007	C15010192-007	C14100554-007	C14070433-007
Bicarbonate as HCO3	mg/L	292	293	298	304
Calcium	mg/L	395	399	394	370
Chloride	mg/L	23	27	21	22
Magnesium	mg/L	180	188	180	176
Nitrogen, Ammonia as N	mg/L	0.34	ND(0.05)	ND(0.05)	ND(0.05)
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	7
Sodium	mg/L	207	206	221	214
Sulfate	mg/L	1860	1950	1820	1860
pH	s.u.	7.06	6.87	7.02	6.88
Solids, Total Dissolved TDS @ 180 C	mg/L	3100	3080	3070	2990
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Manganese	mg/L	1.50	1.54	1.55	1.37
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0016	0.0014	0.0022	0.0014
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	1.9 *	1.7 *	1.7	1.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.6	0.7	0.4	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.8	0.5	0.4	0.6
Lead 210	pCi/L	0.3	0.4	0.1	0.1
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.4	1.4	1.4	1.1
Radium 226 precision (±)	pCi/L	0.35	0.36	0.26	0.20
Radium 226 MDC	pCi/L	0.16	0.16	0.19	0.14
Radium 228	pCi/L	3.6	3.2	3.5	2.5
Radium 228 precision (±)	pCi/L	1.1	0.91	1.2	0.97
Radium 228 MDC	pCi/L	1.1	0.92	1.7	1.4
Thorium 230	pCi/L	-0.02	0.3	0.008	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.1	0.1	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
A/C Balance (± 5)	%	-0.37	-1.88	0.99	-2.22
Anions	meq/L	44.1	46.2	43.4	44.4
Cations	meq/L	43.8	44.5	44.3	42.5
Solids, Total Dissolved Calculated	mg/L	2800	3000	2800	2800
TDS Balance (0.80 - 1.20)		1.09	1.04	1.09	1.05
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 1 Monitor Wells					
Well ID:		EPA-2 Duplicate	EPA-2 Duplicate	EPA-2 Duplicate	EPA-2 Duplicate
Collection Date:		4/8/2015	1/7/2015	10/8/2014	7/9/2014
Receive Date:		4/10/2015	1/9/2015	10/10/2014	7/11/2014
Report Date:		5/19/2015	2/27/2015	11/21/2014	8/28/2014
Analyte	RUnits	C15040351-008	C15010192-008	C14100554-008	C14070433-008
Bicarbonate as HCO3	mg/L	317	318	314	319
Calcium	mg/L	403	397	397	389
Chloride	mg/L	23	27	21	21
Magnesium	mg/L	185	184	183	183
Nitrogen, Ammonia as N	mg/L	0.44	0.42	0.46	0.42
Nitrogen, Nitrate+Nitrite as N	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Potassium	mg/L	7	7	7	7
Sodium	mg/L	212	202	210	224
Sulfate	mg/L	1850	1920	1830	1820
pH	s.u.	6.74	6.74	6.75	6.71
Solids, Total Dissolved TDS @ 180 C	mg/L	3100	3060	3040	2930
Aluminum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Beryllium	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Cadmium	mg/L	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)
Cobalt	mg/L	ND(0.01)	ND(0.01)	ND(0.01)	ND(0.01)
Lead	mg/L	ND(0.001)	ND(0.001)	0.002	ND(0.001)
Manganese	mg/L	1.63	1.65	1.68	1.53
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	ND(0.05)	ND(0.05)	ND(0.05)	ND(0.05)
Uranium	mg/L	0.0017	0.0020	0.0015	0.0011
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	2.1 *	1.5 *	1.9	1.8
Gross Alpha minus Rn & U Precision (±)	pCi/L	1.6	0.6	0.5	0.6
Gross Alpha minus Rn & U MDC	pCi/L	1.8	0.6	0.4	0.6
Lead 210	pCi/L	0.07	-0.6	0.07	0.4
Lead 210 precision (±)	pCi/L	0.8	0.8	0.7	0.7
Lead 210 MDC	pCi/L	1.3	1.4	1.2	1.2
Radium 226	pCi/L	1.5	1.4	1.8	0.98
Radium 226 precision (±)	pCi/L	0.37	0.35	0.30	0.18
Radium 226 MDC	pCi/L	0.15	0.16	0.19	0.14
Radium 228	pCi/L	4.8	3.8	2.8	2.4
Radium 228 precision (±)	pCi/L	1.3	1.1	1.1	0.95
Radium 228 MDC	pCi/L	1.1	0.93	1.7	1.4
Thorium 230	pCi/L	0.005	0.07	-0.02	0.02
Thorium 230 precision (±)	pCi/L	0.07	0.07	0.07	0.05
Thorium 230 MDC	pCi/L	0.2	0.1	0.2	0.1
A/C Balance (± 5)	%	0.42	-2.24	0.26	0.76
Anions	meq/L	44.4	46.0	43.9	43.7
Cations	meq/L	44.7	44.0	44.2	44.4
Solids, Total Dissolved Calculated	mg/L	2900	2900	2800	2800
TDS Balance (0.80 - 1.20)		1.08	1.04	1.07	1.04
Trihalomethanes, Total	ug/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-008
Client Sample ID: EPA-2 Duplicate

Report Date: 02/27/15
Collection Date: 01/07/15 12:50
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	318	mg/L		5		A2320 B	01/09/15 16:12 / wc
Calcium	397	mg/L		1		E200.7	01/12/15 18:14 / sf
Chloride	27	mg/L		1		E300.0	01/09/15 22:27 / wc
Magnesium	184	mg/L		1		E200.7	01/12/15 18:14 / sf
Nitrogen, Ammonia as N	0.42	mg/L		0.05		A4500-NH3 G	01/14/15 13:49 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	01/12/15 13:21 / lr
Potassium	7	mg/L		1		E200.7	01/12/15 18:14 / sf
Sodium	202	mg/L		1		E200.7	01/12/15 18:14 / sf
Sulfate	1920	mg/L	D	4		E300.0	01/09/15 22:27 / wc
PHYSICAL PROPERTIES							
pH	6.74	s.u.	H	0.01		A4500-H B	01/09/15 13:16 / alp
Solids, Total Dissolved TDS @ 180 C	3060	mg/L		20		A2540 C	01/09/15 12:44 / alp
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	01/14/15 13:46 / sf
Beryllium	ND	mg/L		0.001		E200.7	01/14/15 13:46 / sf
Cadmium	ND	mg/L		0.005		E200.7	01/14/15 13:46 / sf
Cobalt	ND	mg/L		0.01		E200.8	01/14/15 22:43 / clm
Lead	ND	mg/L		0.001		E200.8	01/14/15 22:43 / clm
Manganese	1.65	mg/L		0.01		E200.7	01/14/15 13:46 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/14/15 13:46 / sf
Nickel	ND	mg/L		0.05		E200.7	01/14/15 13:46 / sf
Uranium	0.0020	mg/L		0.0003		E200.8	01/14/15 22:43 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/14/15 13:46 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/22/15 15:25 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 11:35 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	1.5	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U Precision (±)	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Gross Alpha minus Rn & U MDC	0.6	pCi/L				E900.1	01/19/15 15:21 / dmf
Lead 210	-0.6	pCi/L	U			E909.0	01/23/15 02:00 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	01/23/15 02:00 / eli-cs
Lead 210 MDC	1.4	pCi/L				E909.0	01/23/15 02:00 / eli-cs
Radium 226	1.4	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 precision (±)	0.35	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 226 MDC	0.16	pCi/L				E903.0	01/26/15 09:49 / rdw
Radium 228	3.8	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 precision (±)	1.1	pCi/L				RA-05	01/21/15 10:03 / plj
Radium 228 MDC	0.93	pCi/L				RA-05	01/21/15 10:03 / plj
Thorium 230	0.07	pCi/L	U			E908.0	01/19/15 09:46 / dmf
Thorium 230 precision (±)	0.07	pCi/L				E908.0	01/19/15 09:46 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	01/19/15 09:46 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15010192-008
Client Sample ID: EPA-2 Duplicate

Report Date: 02/27/15
Collection Date: 01/07/15 12:50
DateReceived: 01/09/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance (± 5)	-2.24	%				A1030 E	01/16/15 07:33 / kbh
Anions	46.0	meq/L				A1030 E	01/16/15 07:33 / kbh
Cations	44.0	meq/L				A1030 E	01/16/15 07:33 / kbh
Solids, Total Dissolved Calculated	2900	mg/L				A1030 E	01/16/15 07:33 / kbh
TDS Balance (0.80 - 1.20)	1.04					A1030 E	01/16/15 07:33 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/14/15 04:10 / jlr
Bromoform	ND	ug/L		0.50		E624	01/14/15 04:10 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/14/15 04:10 / jlr
Chloroform	ND	ug/L		0.50		E624	01/14/15 04:10 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	01/14/15 04:10 / jlr
Surr: 1,2-Dichlorobenzene-d4	104	%REC		73.7-126		E624	01/14/15 04:10 / jlr
Surr: Dibromofluoromethane	111	%REC		64.4-131		E624	01/14/15 04:10 / jlr
Surr: p-Bromofluorobenzene	105	%REC		67.1-133		E624	01/14/15 04:10 / jlr
Surr: Toluene-d8	108	%REC		79.7-125		E624	01/14/15 04:10 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-008
Client Sample ID: EPA-2 Duplicate

Report Date: 05/19/15
Collection Date: 04/08/15 12:40
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	317	mg/L		5		A2320 B	04/10/15 20:32 / wc
Calcium	403	mg/L		1		E200.7	04/13/15 21:14 / sf
Chloride	23	mg/L		1		E300.0	04/13/15 13:48 / wc
Magnesium	185	mg/L		1		E200.7	04/13/15 21:14 / sf
Nitrogen, Ammonia as N	0.44	mg/L		0.05		A4500-NH3 G	04/13/15 13:03 / lr
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.1		E353.2	04/14/15 13:17 / lr
Potassium	7	mg/L		1		E200.7	04/13/15 21:14 / sf
Sodium	212	mg/L		1		E200.7	04/13/15 21:14 / sf
Sulfate	1850	mg/L	D	4		E300.0	04/15/15 01:01 / wc
PHYSICAL PROPERTIES							
pH	6.74	s.u.	H	0.01		A4500-H B	04/13/15 09:37 / lmc
Solids, Total Dissolved TDS @ 180 C	3100	mg/L		20		A2540 C	04/13/15 10:12 / lmc
METALS - TOTAL							
Aluminum	ND	mg/L		0.1		E200.7	04/15/15 15:43 / sf
Beryllium	ND	mg/L		0.001		E200.7	04/15/15 15:43 / sf
Cadmium	ND	mg/L		0.005		E200.8	04/16/15 17:28 / smm
Cobalt	ND	mg/L		0.01		E200.8	04/16/15 17:28 / smm
Lead	ND	mg/L		0.001		E200.8	04/16/15 17:28 / smm
Manganese	1.63	mg/L		0.01		E200.7	04/15/15 15:43 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/15/15 15:43 / sf
Nickel	ND	mg/L		0.05		E200.7	04/15/15 15:43 / sf
Uranium	0.0017	mg/L		0.0003		E200.8	04/16/15 17:28 / smm
Vanadium	ND	mg/L		0.1		E200.7	04/15/15 15:43 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	04/24/15 19:38 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/07/15 15:05 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	2.1	pCi/L				E900.1	04/29/15 21:16 / trs
Gross Alpha minus Rn & U Precision (±)	1.6	pCi/L				E900.1	04/29/15 21:16 / trs
Gross Alpha minus Rn & U MDC	1.8	pCi/L				E900.1	04/29/15 21:16 / trs
Lead 210	0.07	pCi/L	U			E909.0	04/24/15 23:06 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	04/24/15 23:06 / eli-cs
Lead 210 MDC	1.3	pCi/L				E909.0	04/24/15 23:06 / eli-cs
Radium 226	1.5	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 precision (±)	0.37	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 226 MDC	0.15	pCi/L				E903.0	04/22/15 14:11 / plj
Radium 228	4.8	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 precision (±)	1.3	pCi/L				RA-05	04/17/15 09:49 / plj
Radium 228 MDC	1.1	pCi/L				RA-05	04/17/15 09:49 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.
U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1
Lab ID: C15040351-008
Client Sample ID: EPA-2 Duplicate

Report Date: 05/19/15
Collection Date: 04/08/15 12:40
DateReceived: 04/10/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	0.005	pCi/L	U			E908.0	04/17/15 10:24 / cng
Thorium 230 precision (±)	0.07	pCi/L				E908.0	04/17/15 10:24 / cng
Thorium 230 MDC	0.2	pCi/L				E908.0	04/17/15 10:24 / cng
DATA QUALITY							
A/C Balance (± 5)	0.42	%				A1030 E	04/20/15 07:48 / kbh
Anions	44.4	meq/L				A1030 E	04/20/15 07:48 / kbh
Cations	44.7	meq/L				A1030 E	04/20/15 07:48 / kbh
Solids, Total Dissolved Calculated	2900	mg/L				A1030 E	04/20/15 07:48 / kbh
TDS Balance (0.80 - 1.20)	1.08					A1030 E	04/20/15 07:48 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/14/15 07:51 / jlr
Bromoform	ND	ug/L		0.50		E624	04/14/15 07:51 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/14/15 07:51 / jlr
Chloroform	ND	ug/L		0.50		E624	04/14/15 07:51 / jlr
Trihalomethanes, Total	ND	ug/L		0.50		E624	04/14/15 07:51 / jlr
Surr: 1,2-Dichlorobenzene-d4	111	%REC		73.7-126		E624	04/14/15 07:51 / jlr
Surr: Dibromofluoromethane	113	%REC		64.4-131		E624	04/14/15 07:51 / jlr
Surr: p-Bromofluorobenzene	102	%REC		67.1-133		E624	04/14/15 07:51 / jlr
Surr: Toluene-d8	106	%REC		79.7-125		E624	04/14/15 07:51 / jlr

- The sample was received in the laboratory with a pH > 2. The pH was 7.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		717	717	717	717
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-009	C15010404-009	C14100818-005	C14070667-004
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	453	463	458	454
Chloride	mg/L	66	64	68	64
Magnesium	mg/L	487	498	492	502
Nitrogen, Ammonia as N	mg/L	48	68	52	54
Nitrogen, Nitrate+Nitrite as N	mg/L	20	27	26	30
Potassium	mg/L	7	9	8	10
Sodium	mg/L	168	170	165	174
Sulfate	mg/L	4590	4530	4630	4560
pH	s.u.	3.36	3.55	3.70	3.83
Solids, Total Dissolved TDS @ 180 C	mg/L	6680	6470	6470	6210
Aluminum	mg/L	184	175	171	160
Beryllium	mg/L	0.128	0.131	0.134	0.136
Cadmium	mg/L	0.021	0.022	0.020	0.018
Cobalt	mg/L	0.92	0.96	0.96	0.98
Lead	mg/L	0.030	0.030	0.019	0.016
Manganese	mg/L	18.5	19.2	19.3	19.9
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.92	0.94	0.94	0.94
Uranium	mg/L	0.185	0.127	0.120	0.0734
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	312 *	159 *	26.4	19.7
Gross Alpha minus Rn & U Precision (±)	pCi/L	59.6	30.6	1.5	1.5
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	4.5	2.7	3.7	2.3
Lead 210 precision (±)	pCi/L	1.3	0.8	0.9	0.8
Lead 210 MDC	pCi/L	1.6	1.0	1.3	1.2
Radium 226	pCi/L	16	29	15	12
Radium 226 precision (±)	pCi/L	3.2	5.4	0.61	0.65
Radium 226 MDC	pCi/L	0.14	0.17	0.09	0.14
Radium 228	pCi/L	13	17	43	19
Radium 228 precision (±)	pCi/L	2.6	3.1	2.6	1.2
Radium 228 MDC	pCi/L	1.4	1.5	1.9	0.85
Thorium 230	pCi/L	6.4	7.3	5.6	0.9
Thorium 230 precision (±)	pCi/L	1.2	1.4	1.5	0.7
Thorium 230 MDC	pCi/L	1.1	0.7	0.9	1
A/C Balance (± 5)	%	-0.98	0.22	-4.80	-2.16
Anions	meq/L	101	98.6	101	99.1
Cations	meq/L	98.7	99.0	91.6	94.9
Solids, Total Dissolved Calculated	mg/L	6000	5900	6000	5900
TDS Balance (0.80 - 1.20)		1.12	1.09	1.07	1.05
Trihalomethanes, Total	ug/L	3.54	1.59	5.00	2.34

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

UNC Mining and Milling ChurchRock Operations					
GroundWater Monitoring Summary: Zone 3 Monitor Wells					
Well ID:		717 Duplicate	717 Duplicate	717 Duplicate	717 Duplicate
Collection Date:		4/14/2015	1/13/2015	10/14/2014	7/14/2014
Receive Date:		4/17/2015	1/16/2015	10/17/2014	7/18/2014
Report Date:		5/20/2015	2/27/2015	11/24/2014	8/28/2014
Analyte	RUnits	C15040563-010	C15010404-010	C14100818-006	C14070667-005
Bicarbonate as HCO3	mg/L	ND(5)	ND(5)	ND(5)	ND(5)
Calcium	mg/L	462	469	460	446
Chloride	mg/L	67	65	69	65
Magnesium	mg/L	498	504	495	508
Nitrogen, Ammonia as N	mg/L	50	57	52	52
Nitrogen, Nitrate+Nitrite as N	mg/L	20	24	28	28
Potassium	mg/L	7	8	8	10
Sodium	mg/L	173	172	158	175
Sulfate	mg/L	4680	4560	4680	4720
pH	s.u.	3.33	3.50	3.67	3.77
Solids, Total Dissolved TDS @ 180 C	mg/L	6720	6610	6520	6290
Aluminum	mg/L	186	180	166	163
Beryllium	mg/L	0.129	0.130	0.130	0.131
Cadmium	mg/L	0.021	0.022	0.016	0.017
Cobalt	mg/L	0.91	0.97	0.96	0.97
Lead	mg/L	0.023	0.019	0.017	0.013
Manganese	mg/L	18.8	19.4	18.5	19.6
Molybdenum	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Nickel	mg/L	0.92	0.92	0.92	0.93
Uranium	mg/L	0.180	0.153	0.117	0.0899
Vanadium	mg/L	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
Arsenic-III	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Selenium-IV	mg/L	ND(0.001)	ND(0.001)	ND(0.001)	ND(0.001)
Gross Alpha minus Rn & U	pCi/L	304 *	148 *	29.2	19.1
Gross Alpha minus Rn & U Precision (±)	pCi/L	58.1	28.6	1.5	1.5
Gross Alpha minus Rn & U MDC	pCi/L	1.1	1	0.4	0.5
Lead 210	pCi/L	4.5	2.3	3.1	2.2
Lead 210 precision (±)	pCi/L	1.3	0.8	0.9	0.8
Lead 210 MDC	pCi/L	1.6	1.0	1.3	1.2
Radium 226	pCi/L	16	30	14	12
Radium 226 precision (±)	pCi/L	3.1	5.7	0.59	0.66
Radium 226 MDC	pCi/L	0.14	0.16	0.09	0.14
Radium 228	pCi/L	13	19	41	18
Radium 228 precision (±)	pCi/L	2.6	3.6	2.5	1.2
Radium 228 MDC	pCi/L	1.4	1.4	1.8	0.87
Thorium 230	pCi/L	10.1	7.3	5.0	0.7
Thorium 230 precision (±)	pCi/L	1.9	1.4	1.4	0.3
Thorium 230 MDC	pCi/L	1.8	0.6	1.0	0.4
A/C Balance (± 5)	%	-0.26	0.39	-5.21	-3.53
Anions	meq/L	101	99.3	102	102
Cations	meq/L	101	100	91.9	95.5
Solids, Total Dissolved Calculated	mg/L	6100	6000	6100	6100
TDS Balance (0.80 - 1.20)		1.10	1.10	1.07	1.04
Trihalomethanes, Total	ug/L	4.04	3.40	5.20	4.44

* Gross Alpha minus Rn & U may be higher than history due to a change in the method. See Case Narrative of report for more information.

**Note: The data presented on this form is intended for summary purposes only. Laboratory approved data is contained within the attached database reports.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-010
Client Sample ID: 717 Duplicate

Report Date: 02/27/15
Collection Date: 01/13/15 09:25
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	01/19/15 20:25 / wc
Calcium	469	mg/L		1		E200.7	01/21/15 19:27 / sf
Chloride	65	mg/L	D	2		E300.0	01/20/15 13:18 / wc
Magnesium	504	mg/L		1		E200.7	01/21/15 19:27 / sf
Nitrogen, Ammonia as N	57	mg/L	D	5		A4500-NH3 G	01/21/15 13:19 / lr
Nitrogen, Nitrate+Nitrite as N	24	mg/L	D	2		E353.2	01/16/15 15:39 / lr
Potassium	8	mg/L		1		E200.7	01/21/15 19:27 / sf
Sodium	172	mg/L		1		E200.7	01/21/15 19:27 / sf
Sulfate	4560	mg/L	D	8		E300.0	01/20/15 13:18 / wc
PHYSICAL PROPERTIES							
pH	3.50	s.u.	H	0.01		A4500-H B	01/19/15 12:54 / alp
Solids, Total Dissolved TDS @ 180 C	6610	mg/L		100		A2540 C	01/19/15 08:53 / alp
METALS - TOTAL							
Aluminum	180	mg/L		0.1		E200.7	01/21/15 17:16 / sf
Beryllium	0.130	mg/L		0.001		E200.7	01/21/15 17:16 / sf
Cadmium	0.022	mg/L		0.005		E200.8	01/21/15 16:55 / clm
Cobalt	0.97	mg/L		0.01		E200.8	01/21/15 16:55 / clm
Lead	0.019	mg/L		0.001		E200.8	01/21/15 16:55 / clm
Manganese	19.4	mg/L		0.01		E200.7	01/21/15 17:16 / sf
Molybdenum	ND	mg/L		0.1		E200.7	01/21/15 17:16 / sf
Nickel	0.92	mg/L		0.05		E200.8	01/21/15 16:55 / clm
Uranium	0.153	mg/L		0.0003		E200.8	01/21/15 16:55 / clm
Vanadium	ND	mg/L		0.1		E200.7	01/21/15 17:16 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	01/26/15 16:31 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	02/02/15 12:44 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	148	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U Precision (±)	28.6	pCi/L				E900.1	01/23/15 13:01 / dmf
Gross Alpha minus Rn & U MDC	1	pCi/L				E900.1	01/23/15 13:01 / dmf
Lead 210	2.3	pCi/L				E909.0	02/07/15 08:37 / eli-cs
Lead 210 precision (±)	0.8	pCi/L				E909.0	02/07/15 08:37 / eli-cs
Lead 210 MDC	1.0	pCi/L				E909.0	02/07/15 08:37 / eli-cs
Radium 226	30	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 precision (±)	5.7	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 226 MDC	0.16	pCi/L				E903.0	01/27/15 07:23 / trs
Radium 228	19	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 precision (±)	3.6	pCi/L				RA-05	01/22/15 13:41 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	01/22/15 13:41 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15010404-010
Client Sample ID: 717 Duplicate

Report Date: 02/27/15
Collection Date: 01/13/15 09:25
DateReceived: 01/16/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	7.3	pCi/L				E908.0	02/18/15 13:16 / dmf
Thorium 230 precision (±)	1.4	pCi/L				E908.0	02/18/15 13:16 / dmf
Thorium 230 MDC	0.6	pCi/L				E908.0	02/18/15 13:16 / dmf
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	0.39	%				A1030 E	01/26/15 09:06 / kbh
Anions	99.3	meq/L				A1030 E	01/26/15 09:06 / kbh
Cations	100	meq/L				A1030 E	01/26/15 09:06 / kbh
Solids, Total Dissolved Calculated	6000	mg/L				A1030 E	01/26/15 09:06 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	01/26/15 09:06 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	01/17/15 01:42 / jlr
Bromoform	ND	ug/L		0.50		E624	01/17/15 01:42 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	01/17/15 01:42 / jlr
Chloroform	3.40	ug/L		0.50		E624	01/17/15 01:42 / jlr
Trihalomethanes, Total	3.40	ug/L		0.50		E624	01/17/15 01:42 / jlr
Surr: 1,2-Dichlorobenzene-d4	116	%REC		73.7-126		E624	01/17/15 01:42 / jlr
Surr: Dibromofluoromethane	97.0	%REC		64.4-131		E624	01/17/15 01:42 / jlr
Surr: p-Bromofluorobenzene	124	%REC		67.1-133		E624	01/17/15 01:42 / jlr
Surr: Toluene-d8	99.0	%REC		79.7-125		E624	01/17/15 01:42 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 4.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-010
Client Sample ID: 717 Duplicate

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:15
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Bicarbonate as HCO3	ND	mg/L		5		A2320 B	04/20/15 17:03 / wc
Calcium	462	mg/L		1		E200.7	04/21/15 17:19 / sf
Chloride	67	mg/L	D	2		E300.0	04/21/15 23:43 / wc
Magnesium	498	mg/L		1		E200.7	04/21/15 17:19 / sf
Nitrogen, Ammonia as N	50	mg/L	D	1		A4500-NH3 G	04/21/15 13:32 / lr
Nitrogen, Nitrate+Nitrite as N	20	mg/L	D	1		E353.2	04/20/15 14:46 / lr
Potassium	7	mg/L		1		E200.7	04/22/15 16:16 / sf
Sodium	173	mg/L		1		E200.7	04/21/15 17:19 / sf
Sulfate	4680	mg/L	D	8		E300.0	04/21/15 23:43 / wc
PHYSICAL PROPERTIES							
pH	3.33	s.u.	H	0.01		A4500-H B	04/24/15 10:01 / lmc
Solids, Total Dissolved TDS @ 180 C	6720	mg/L		40		A2540 C	04/20/15 09:49 / lmc
METALS - TOTAL							
Aluminum	186	mg/L		0.1		E200.7	04/21/15 19:02 / sf
Beryllium	0.129	mg/L		0.001		E200.7	04/21/15 19:02 / sf
Cadmium	0.021	mg/L		0.005		E200.8	04/22/15 00:20 / clm
Cobalt	0.91	mg/L		0.01		E200.8	04/22/15 00:20 / clm
Lead	0.023	mg/L		0.001		E200.8	04/22/15 00:20 / clm
Manganese	18.8	mg/L		0.01		E200.7	04/21/15 19:02 / sf
Molybdenum	ND	mg/L		0.1		E200.7	04/21/15 19:02 / sf
Nickel	0.92	mg/L		0.05		E200.7	04/21/15 19:02 / sf
Uranium	0.180	mg/L		0.0003		E200.8	04/22/15 00:20 / clm
Vanadium	ND	mg/L		0.1		E200.7	04/21/15 19:02 / sf
METALS - SPECIATED							
Arsenic-III	ND	mg/L		0.001		E1632AM	05/06/15 12:52 / eli-h
Selenium-IV	ND	mg/L		0.001		A3114 B	05/15/15 11:15 / tkr
RADIONUCLIDES - TOTAL							
Gross Alpha minus Rn & U	304	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U Precision (±)	58.1	pCi/L				E900.1	04/22/15 13:31 / plj
Gross Alpha minus Rn & U MDC	1.1	pCi/L				E900.1	04/22/15 13:31 / plj
Lead 210	4.5	pCi/L				E909.0	05/05/15 13:45 / eli-cs
Lead 210 precision (±)	1.3	pCi/L				E909.0	05/05/15 13:45 / eli-cs
Lead 210 MDC	1.6	pCi/L				E909.0	05/05/15 13:45 / eli-cs
Radium 226	16	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 precision (±)	3.1	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 226 MDC	0.14	pCi/L				E903.0	05/04/15 09:48 / dmf
Radium 228	13	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 precision (±)	2.6	pCi/L				RA-05	04/28/15 14:04 / plj
Radium 228 MDC	1.4	pCi/L				RA-05	04/28/15 14:04 / plj

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-3
Lab ID: C15040563-010
Client Sample ID: 717 Duplicate

Revised Date: 06/04/15
Report Date: 05/20/15
Collection Date: 04/14/15 12:15
DateReceived: 04/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Thorium 230	10.1	pCi/L				E908.0	05/14/15 09:34 / cng
Thorium 230 precision (±)	1.9	pCi/L				E908.0	05/14/15 09:34 / cng
Thorium 230 MDC	1.8	pCi/L				E908.0	05/14/15 09:34 / cng
- See Case Narrative regarding Alpha-U analysis.							
DATA QUALITY							
A/C Balance (± 5)	-0.26	%				A1030 E	04/24/15 10:56 / kbh
Anions	101	meq/L				A1030 E	04/24/15 10:56 / kbh
Cations	101	meq/L				A1030 E	04/24/15 10:56 / kbh
Solids, Total Dissolved Calculated	6100	mg/L				A1030 E	04/24/15 10:56 / kbh
TDS Balance (0.80 - 1.20)	1.10					A1030 E	04/24/15 10:56 / kbh
VOLATILE ORGANIC COMPOUNDS							
Bromodichloromethane	ND	ug/L		0.50		E624	04/20/15 22:40 / jlr
Bromoform	ND	ug/L		0.50		E624	04/20/15 22:40 / jlr
Chlorodibromomethane	ND	ug/L		0.50		E624	04/20/15 22:40 / jlr
Chloroform	4.04	ug/L		0.50		E624	04/20/15 22:40 / jlr
Trihalomethanes, Total	4.04	ug/L		0.50		E624	04/20/15 22:40 / jlr
Surr: 1,2-Dichlorobenzene-d4	113	%REC		73.7-126		E624	04/20/15 22:40 / jlr
Surr: Dibromofluoromethane	114	%REC		64.4-131		E624	04/20/15 22:40 / jlr
Surr: p-Bromofluorobenzene	114	%REC		67.1-133		E624	04/20/15 22:40 / jlr
Surr: Toluene-d8	101	%REC		79.7-125		E624	04/20/15 22:40 / jlr
- The sample was received in the laboratory with a pH > 2. The pH was 7.							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

APPENDIX – C

QUARTERLY

CHAIN OF CUSTODY REPORT

C15010153

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

SW Alluvium

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-1-1-2015

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
509-D	1-5-15	0845	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23	1-5-15	0932	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			K, Mg, Mn, Na, NH_4, Ni,
803	1-5-15	1020	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			NO_3, Pb, Pb-210, pH, Se,
808	1-5-15	1102	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			SO_4, TDS, Th-230, U, V,
802	1-5-15	1148	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Chloroform, Gross
632	1-5-15	1235	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Alpha (-) U & Rn,
801	1-5-15	1320	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Combined Ra-226 & Ra-228, Al,
GW-2	1-5-15	1415	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Co, Mo & Total Trihalomethanes (TTHMs)
GW-1	1-5-15	1510	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
EPA-28	1-5-15	1602	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
EPA-28 DUPLICATE	1-5-15	1640	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			

Sampled by: M. Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS- Ground
5 iced cooler
Method of Shipment

Received by: [signature]
1-6-15 9:57
Date Time

1-5-15 1730
Date Time
Lab Receipt Signature
1-5-15 1100
Date Time

The above analysis to be performed is authorized by:
M. Chischilly Jr.
Signature
1-6-2015
Date

Work Order Receipt Checklist

United Nuclear Corporation

C15010153

Login completed by: Debra Williams
Reviewed by: BL2000\swaldrop
Reviewed Date: 1/9/2015

Date Received: 1/8/2015
Received by: dw
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	3.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

SW Alluvium

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-2-1-2014 (PG. 1 OF 2)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
624	1-6-15	0955	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	1-✓ nc	3-✓ nc		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
SBL-1	1-6-15	1025	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	1-✓ nc	3-✓ nc			K, Mg, Mn, Na, NH_4, Ni,
GW-3	1-6-15	1130	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	1-✓ nc	3-✓ nc			NO_3, Pb, Pb-210, pH, Se,
EPA-25	1-6-15	1240	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	1-✓ nc	3-✓ nc			SO_4, TDS, Th-230, U, V,
627	1-6-15	1345	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	1-✓ nc	3-✓ nc		↓	Chloroform, Gross
614 nc	1-6-15	1448	1-(80z.)✓ nc	2-✓ nc	4-✓ nc	~~1-✓ nc~~	~~3-✓ nc~~			Alpha (-) U & Rn,
515-A nc										Combined Ra-226 & Ra-228, Al,
										Co, Mo & Total Trihalomethanes (TTHMs)

Sampled by: Mel Chischilly Jr.
Dispatched by: Mel Chischilly Jr.
Carrier: UPS-Ground
5 iced cooler
Method of Shipment

Received by: [signature]
1-7-15 1715
Date Time

1-6-15 1730
Date Time
[signature]
Lab Receipt Signature
1-7-15 930
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-7-2014
Date

AK501092

Work Order Receipt Checklist

United Nuclear Corporation

C15010193

Login completed by: Corinne Wagner
Reviewed by: BL2000\swaldrop
Reviewed Date: 1/13/2015

Date Received: 1/9/2015
Received by: dw
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 recevied at 2.6° C
Cooler 2 received at 1.8° C
Cooler 3 received at 1.2° C

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE – 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 2-1-2014 (PG. 2 OF 2)

C15010192

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
614	1-6-15	1448	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	1-6-15	1556	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			K, Mg, Mn, Na, NH_4, Ni,
604	1-6-15	1648	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			NO_3, Pb, Pb-210, pH, Se,
EPA-4	1-7-15	0935	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			SO_4, TDS, Th-230, U, V,
EPA-5	1-7-15	1032	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			Chloroform, Gross
EPA-1	1-7-15	1125	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			Alpha (-) U & Rn,
EPA-2	1-7-15	1215	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			Combined Ra-226 & Ra-228, Al,
EPA-2 DUPLICATE	1-7-15	1250	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			Co, Mo & Total Trihalomethanes (TTHMs)
TWQ-142	1-7-15	1410	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			
RINSATE	1-7-15	1450	1-(8oz.)✓	2-✓	4-✓	1-✓	3-✓			
FIELD BLANK	1-7-15	1500	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		↓	

Sampled by: M. Chischilly Jr.
Dispatched by: M. Chischilly Jr.
Carrier: UPS- Ground
5 Iced cooler
Method of Shipment

Received by: [signature]
1-7-15 1745
Date Time

1-6-15 @ 1730
1-7-15 @ 1500
Date Time
Lab Receipt Signature
1-9-15 930
Date Time

The above analysis to be performed is authorized by:
M. Chischilly Jr.
Signature
1-7-2015
Date

Work Order Receipt Checklist

United Nuclear Corporation

C15010192

Login completed by: Debra Williams
Date Received: 1/9/2015

Reviewed by: BL2000\swaldrop
Received by: dw

Reviewed Date: 1/13/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 recevied at 2.2° C
Cooler 2 received at 0.2° C
Cooler 3 received at 1.4° C
Cooler 4 received at 2.6° C
Cooler 5 received at 2.0° C

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

ZONE - 3

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE- 3-1-2015

Sample Description	Date	Time	Filter 0.45u (HNO3)	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
613	1-12-15	0930	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne		M. Chischilly✓	As, Be, Ca, Cd, Cl, HCO_3,
517	1-12-15	1015	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			K, Mg, Mn, Na, NH_4, Ni,
708	1-12-15	1135	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			NO_3, Pb, Pb-210, pH, Se,
711	1-12-15	1255	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			SO_4, TDS, Th-230, U, V,
EPA-13	1-12-15	1336	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			Chloroform, Gross
719	1-12-15	1428	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			Alpha (-) U & Rn,
420	1-12-15	1547	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			Combined Ra-226 & Ra-228, Al,
EPA-14	1-12-15	1640	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			Co, Mo & Total Trihalomethanes (TTHMs)
717	1-13-15	0850	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			
717 DUPLICATE	1-13-15	0925	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			
MW-7	1-13-15	1030	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			
RINSATE	1-13-15	1525	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne			
FIELD BLANK	1-13-15	1600	1-(8oz.)✓ ne	2-✓ ne	4-✓ ne	1-✓ ne	3-✓ ne		↓	

Sampled by: Mel Chischilly Jr.
Dispatched by: Mel Chischilly Jr.
Carrier: UPS- GROUND
5 ICED COOLER
Method of Shipment

Received by: [signature]
1-14-15 1100
Date Time

1-12-15 1800
1-13-15 1600
Date Time
[signature]
Lab Receipt Signature
1/16/15 940
Date Time

The above analysis to be performed is authorized by:
Mel Chischilly Jr.
Signature
1-14-2015
Date

C15010404

Work Order Receipt Checklist

United Nuclear Corporation

C15010404

Login completed by: Corinne Wagner
Date Received: 1/16/2015

Reviewed by: BL2000\swaldrop
Received by: dw

Reviewed Date: 1/20/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	3.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

UNC MINING & MILLING
(St. Rd. 566 - 21 Miles NE of Gallup)
P. O. Box 3077
Gallup, NM 87305-3077
(505) 905-6651

CHAIN OF CUSTODY

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

Energy Laboratories, Inc.
Laboratory
2393 N. Salt Creek Highway
Address
Casper WY 82601
City State Zip
(307) 235-0515
Phone No.

UNC Submittal No. EW- 1-1- 2015

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	NaOH	Preserved By	Analysis Required
NBL-2	1-13-15	1005		1- ✓ ne					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
PB-3	1-13-15	1140		1- ✓ ne						
PB-4	1-13-15	1220		1- ✓ ne						
MW-6	1-13-15	1325		1- ✓ ne						
NW-1	1-13-15	0954		1- ✓ ne						
NW-4	1-13-15	1017		1- ✓ ne						
NW-3	1-13-15	1044		1- ✓ ne						
NW-5	1-13-15	1100		1- ✓ ne						
NW-2	1-13-15	1119		1- ✓ ne						
RWA	1-13-15	1140		1- ✓ ne						

Sampled By: Maf Chischilly Jr.
Received By: [signature] 1-13-15 Date 1600 Time
Dispatched By: Maf Chischilly Jr. 1-14-15 Date 1100 Time
Carrier: UPS - GROUND
5 ICED COOLER
Method of Shipment
[signature] Lab Receipt Signature
1-16-15 Date 940 Time

The above analysis to be performed is authorized by:
Maf Chischilly Jr.
Signature
1- 14- 2015
Date

Page 27 of 27

Work Order Receipt Checklist

United Nuclear Corporation

C15010403

Login completed by: Corinne Wagner
Date Received: 1/16/2015

Reviewed by: BL2000\swaldrop
Received by: dw

Reviewed Date: 1/20/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	7.4°C		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

SW Alluvium

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-4-4-2015

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
509-D	4-6-15	0907	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
EPA-23	4-6-15	1003	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			K, Mg, Mn, Na, NH_4, Ni,
803	4-6-15	1050	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			NO_3, Pb, Pb-210, pH, Se,
808	4-6-15	1135	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			SO_4, TDS, Th-230, U, V,
802	4-6-15	1225	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Chloroform, Gross
632	4-6-15	1305	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Alpha (-) U & Rn,
801	4-6-15	1350	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Combined Ra-226 & Ra-228, Al,
GW-2	4-6-15	1440	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Co, Mo & Total Trihalomethanes (TTHMs)
GW-1	4-6-15	1535	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
EPA-28	4-6-15	1620	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
EPA-28 DUPLICATE	4-6-15	1700	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		↓	

Sampled by: M. Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS - Ground
4 iced cooler
Method of Shipment

Received by: Francisca Gallo
4-7-15 11:09
Date Time

4-6-15 1740
Date Time
[signature]
Lab Receipt Signature
4/9/15 9:25
Date Time

The above analysis to be performed is authorized by:
M. Chischilly Jr.
Signature
4-7-2015
Date

05040322

Work Order Receipt Checklist

United Nuclear Corporation

C15040322

Login completed by: Corinne Wagner
Date Received: 4/9/2015

Reviewed by: BL2000\swaldrop
Received by: ckw

Reviewed Date: 4/13/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (*Exclude analyses that are considered field parameters* such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	10.2°C Melted Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☑	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples 509-D, 808, and 802 for radionuclides were received at pH 7, 2 mLs nitric acid added to preserve to pH <2.

2 out of 3 VOA vials for sample 803 and 1 out of 3 VOA vials for samples 808, 802, GW-2 were received for Volatile Organics Analysis containing headspace gas bubbles greater than 1/4 Inch in diameter. OK to analyze with remaining vials.

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6851

CHAIN OF CUSTODY

SW Alluvium

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

UNC Submittal No. TE-5-4-2015 (PG.1 OF 2)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
624	4-7-15	0850	1-(8oz.) ✓ ✓	2-✓ ✓	5-✓ ✓	1-✓ ✓	3-✓ ✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
SBL-1	4-7-15	0942	1-(8oz.) ✓ ✓	2-✓ ✓	5-✓ ✓	1-✓ ✓	3-✓ ✓			K, Mg, Mn, Na, NH_4, Ni,
GW-3	4-7-15	1042	1-(8oz.) ✓ ✓	2-✓ ✓	5-✓ ✓	1-✓ ✓	3-✓ ✓			NO_3, Pb, Pb-210, pH, Se,
EPA-25	4-7-15	1200	1-(8oz.) ✓ ✓	2-✓ ✓	5-✓ ✓	1-✓ ✓	3-✓ ✓			SO_4, TDS, Th-230, U, V,
627	4-7-15	1300	1-(8oz.) ✓ ✓	2-✓ ✓	5-✓ ✓	1-✓ ✓	3-✓ ✓		↓	Chloroform, Gross Alpha (-) U & Rn, Combined Ra-226 & Ra-228, Al, Co, Mo & Total Trihalomethanes (TTHMs)
										C15040353

Sampled by: M. Chischilly Jr.
Dispatched by: [signature]
Carrier: UPS-Ground
9 iced cooler
Method of Shipment

Received by: [signature]
4-8-15 3:40
Date Time

4-7-15 1700
Date Time
Lab Receipt Signature

4/10/15 9:25
Date Time

The above analysis to be performed is authorized by:
M. Chischilly Jr.
Signature
4-8-2015
Date

Work Order Receipt Checklist

United Nuclear Corporation

C15040353

Login completed by: Dorian Quis
Date Received: 4/10/2015

Reviewed by: BL2000\swaldrop
Received by: amm

Reviewed Date: 4/13/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	8.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 ~ 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

ZONE – 1

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-5-4-2015 (Pg. 2 of 2)

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
614	4-7-15	1355	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		M. Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
515-A	4-7-15	1500	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			K, Mg, Mn, Na, NH_4, Ni,
604	4-7-15	1552	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			NO_3, Pb, Pb-210, pH, Se,
EPA-1	4-8-15	0925	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			SO_4, TDS, Th-230, U, V,
EPA-5	4-8-15	1005	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Chloroform, Gross
EPA-4	4-8-15	1058	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Alpha (-) U & Rn,
EPA-2	4-8-15	1205	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Combined Ra-226 & Ra-228, Al,
EPA-2 DUPLICATE	4-8-15	1240	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Co, Mo & Total Trihalomethanes (TTHMs)
TRIP-142	4-8-15	1340	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
RINSATE	4-8-15	1430	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
FIELD BLANK	4-8-15	1530	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		↓	C15040351

Sampled by: M. Chischilly Jr.

Dispatched by: [signature]

Carrier: UPS - Ground

9 iced cooler
Method of Shipment

Received by: [signature]
4-8-15 3:40
Date Time

4-7-15 @ 1700
4-8-15 @ 1530
Date Time

Lab Receipt Signature

4/10/15 9:25
Date Time

The above analysis to be performed is authorized by:

M. Chischilly Jr.
Signature

4-8-2015
Date

Work Order Receipt Checklist

United Nuclear Corporation

C15040351

Login completed by: Dorian Quis
Date Received: 4/10/2015

Reviewed by: BL2000\swaldrop
Received by: amm

Reviewed Date: 4/13/2015
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	8.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

UNITED NUCLEAR CORPORATION
(State Road 566 - 21 Miles NE of Gallup)
P.O. Box 3077
Gallup, NM 87305-3077
505-905-6651

CHAIN OF CUSTODY

ZONE – 3

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

307-235-0515
Phone No.

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

UNC Submittal No. TE-6-4-2015

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	HCl	Preserved By	Analysis Required (For all samples listed)
613	4-13-15	0840	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		M.Chischilly	As, Be, Ca, Cd, Cl, HCO_3,
617	4-13-15	0930	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			K, Mg, Mn, Na, NH_4, Ni,
708	4-13-15	1055	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			NO_3, Pb, Pb-210, pH, Se,
711	4-13-15	1240	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			SO_4, TDS, Th-230, U, V,
EPA-13	4-13-15	1310	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Chloroform, Gross
719	4-13-15	1405	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Alpha (-) U & Rn,
420	4-13-15	1545	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Combined Ra-226 & Ra-228, Al,
EPA-14	4-14-15	0935	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			Co, Mo & Total Trihalomethanes (TTHMs)
717	4-14-15	1140	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
717 DUPLICATE	4-14-15	1215	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
MW-7	4-14-15	1310	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓			
RINSATE	4-14-15	1755	1-(8oz)✓	2-✓	5-✓	1-✓	3-✓			
FIELD BLANK	4-14-15	1800	1-(8oz.)✓	2-✓	5-✓	1-✓	3-✓		✓	

Sampled by: M. Chischilly Jr.

Dispatched by:

Carrier: UPS- Ground

6 iced cooler
Method of Shipment

Received by: Laurena Mallo
4-15-15 10:00
Date Time

4-13-15 @ 1635
4-14-15 @ 0830
Date Time

Lab Receipt Signature

4/17/15 9:15
Date Time

The above analysis to be performed is authorized by:

Signature

4-15-2015
Date

C15040563

UNC MINING & MILLING
(St. Rd. 566 - 21 Miles NE of Gallup)
P. O. Box 3077
Gallup, NM 87305-3077
(505) 905-6851

CHAIN OF CUSTODY

ZONE - 3

All analysis will be performed in accordance with EPA approved procedures and/or 15th Edition of Standard Methods

Energy Laboratories, Inc.
Laboratory

2393 N. Salt Creek Highway
Address

Casper WY 82601
City State Zip

(307) 235-0515
Phone No.

UNC Submittal No. EM-2-4-2014

Sample Description	Date	Time	Filter 0.45u	PRESERVATION & NUMBER OF CONTAINERS plain	HNO_3	H_2SO_4	$Na_2S_2O_3$	NaOH	Preserved By	Analysis Required
NBL-2	4-14-15	1250		1-✓ ne					M. Chischilly	Bicarbonate (HCO_3), Chloride (Cl), pH, TDS
PB-3	4-14-15	1445		1-✓ ne						
PB-4	4-14-15	1625		1-✓ ne						
MW-6	4-14-15	1735		1-✓ ne						
NW-1	4-14-15	1300		1-✓ ne						
NW-4	4-14-15	1215		1-✓ ne						
NW-2	4-14-15	1236		1-✓ ne						
NW-3	4-14-15	1253		1-✓ ne						
NW-5	4-14-15	1307		1-✓ ne						
RW-A	4-14-15	1326		1-✓ ne						

Sampled By: M. Chischilly Jr.

Dispatched By:

Carrier: UPS-Ground

6 iced cooler
Method of Shipment

Received By: [signature] 4-14-15 1830
Date Time

4-15-15 10:02
Date Time

Lab Receipt Signature

Date Time

The above analysis to be performed is authorized by:

Signature

4-15-2015
Date

C15040563

Work Order Receipt Checklist

United Nuclear Corporation

C15040563

Login completed by: Dorian Quis
Reviewed by: BL2000\swaldrop
Reviewed Date: 4/21/2015

Date Received: 4/17/2015
Received by: amm
Carrier name: Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	8.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

11 raw samples were received with a natural pH of 3.

APPENDIX – D (1 OF 2)

FIRST QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

ANALYTICAL SUMMARY REPORT

February 27, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15010153 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 1/8/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010153-001	509-D	01/05/15 8:45	01/08/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15010153-002	EPA-23	01/05/15 9:32	01/08/15	Aqueous	Same As Above
C15010153-003	803	01/05/15 10:20	01/08/15	Aqueous	Same As Above
C15010153-004	808	01/05/15 11:02	01/08/15	Aqueous	Same As Above
C15010153-005	802	01/05/15 11:48	01/08/15	Aqueous	Same As Above
C15010153-006	632	01/05/15 12:35	01/08/15	Aqueous	Same As Above
C15010153-007	801	01/05/15 13:20	01/08/15	Aqueous	Same As Above
C15010153-008	GW-2	01/05/15 14:15	01/08/15	Aqueous	Same As Above
C15010153-009	GW-1	01/05/15 15:10	01/08/15	Aqueous	Same As Above
C15010153-010	EPA-28	01/05/15 16:02	01/08/15	Aqueous	Same As Above
C15010153-011	EPA-28 Duplicate	01/05/15 16:40	01/08/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2015.02.27 11:19:51 -07:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Sample Delivery Group: C15010153

Report Date: 02/27/15

CASE NARRATIVE

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R195008
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150109A			01/08/15 14:55	
Alkalinity, Total as CaCO3		2	mg/L	0.6						
Bicarbonate as HCO3		2	mg/L	1						
Lab ID: LCS_141001		Laboratory Control Sample				Run: MANTECH_150109A			01/08/15 15:09	
Alkalinity, Total as CaCO3		249	mg/L	5.0	99	90	110			
Lab ID: C15010068-001ADUP	2	Sample Duplicate				Run: MANTECH_150109A			01/08/15 15:24	
Alkalinity, Total as CaCO3		211	mg/L	5.0				0.3	10	
Bicarbonate as HCO3		257	mg/L	5.0				0.3	10	
Lab ID: C15010068-002AMS		Sample Matrix Spike				Run: MANTECH_150109A			01/08/15 15:41	
Alkalinity, Total as CaCO3		443	mg/L	5.0	89	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS150108A	
Lab ID: MB-1_150108A		Method Blank				Run: BAL-18_150108A			01/08/15 14:52	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_150108A		Laboratory Control Sample				Run: BAL-18_150108A			01/08/15 14:52	
Solids, Total Dissolved TDS @ 180 C		1120	mg/L	11	101	90	110			
Lab ID: C15010152-001A MS		Sample Matrix Spike				Run: BAL-18_150108A			01/08/15 14:53	
Solids, Total Dissolved TDS @ 180 C		37100	mg/L	200	100	90	110			
Lab ID: C15010153-009A DUP		Sample Duplicate				Run: BAL-18_150108A			01/08/15 14:55	
Solids, Total Dissolved TDS @ 180 C		6600	mg/L	100				1.1	5	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150123C	
Lab ID: ICV	Initial Calibration Verification Standard								01/23/15 10:54	
Selenium-IV		0.0265	mg/L	0.0010	106	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard								01/23/15 11:13	
Selenium-IV		0.0261	mg/L	0.0010	104	90	110			
Method: A3114 B									Batch: 43756	
Lab ID: MB-43756	Method Blank					Run: CVAA-C202_150123C			01/23/15 10:58	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-43756	Laboratory Control Sample					Run: CVAA-C202_150123C			01/23/15 11:00	
Selenium-IV		0.0256	mg/L	0.0010	103	90	110			
Lab ID: C15010153-001CMS	Sample Matrix Spike					Run: CVAA-C202_150123C			01/23/15 11:03	
Selenium-IV		0.0265	mg/L	0.0010	106	85	115			
Lab ID: C15010153-001CMSD	Sample Matrix Spike Duplicate					Run: CVAA-C202_150123C			01/23/15 11:04	
Selenium-IV		0.0269	mg/L	0.0010	107	85	115	1.5	10	
Lab ID: C15010193-001CMS	Sample Matrix Spike					Run: CVAA-C202_150123C			01/23/15 11:26	
Selenium-IV		0.0255	mg/L	0.0010	102	85	115			
Lab ID: C15010193-001CMSD	Sample Matrix Spike Duplicate					Run: CVAA-C202_150123C			01/23/15 11:27	
Selenium-IV		0.0250	mg/L	0.0010	100	85	115	1.7	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150108A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								01/08/15 08:30	
pH		6.84	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								01/08/15 15:26	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R194955	
Lab ID: **C15010153-004ADUP**	Sample Duplicate					Run: PHSC_101-C_150108A			01/08/15 14:52	
pH		6.63	s.u.	0.010				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150109A	
Lab ID: CCV-16	Continuing Calibration Verification Standard								01/09/15 12:30	
Nitrogen, Ammonia as N		1.03	mg/L	0.050	103	90	110			
Method: A4500-NH3 G									Batch: R195021	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150109A			01/09/15 12:05	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150109A			01/09/15 12:08	
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110			
Lab ID: C15010153-008DMS	Sample Matrix Spike					Run: TECHNICON_150109A			01/09/15 12:57	
Nitrogen, Ammonia as N		5.56	mg/L	0.050	96	90	110			
Lab ID: C15010153-008DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150109A			01/09/15 12:58	
Nitrogen, Ammonia as N		5.61	mg/L	0.050	98	90	110	0.9	10	
Method: A4500-NH3 G									Batch: R195105	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150113A			01/13/15 15:22	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150113A			01/13/15 15:26	
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Lab ID: C15010166-001AMS	Sample Matrix Spike					Run: TECHNICON_150113A			01/13/15 15:41	
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Lab ID: C15010166-001AMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150113A			01/13/15 15:42	
Nitrogen, Ammonia as N		1.81	mg/L	0.050	92	90	110	1.1	10	
Method: A4500-NH3 G									Analytical Run: TECHNICON_150114A	
Lab ID: CCV-12	Continuing Calibration Verification Standard								01/14/15 13:19	
Nitrogen, Ammonia as N		1.01	mg/L	0.050	101	90	110			
Lab ID: CCV-43	Continuing Calibration Verification Standard								01/14/15 14:10	
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Method: A4500-NH3 G									Batch: R195158	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150114A			01/14/15 13:00	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150114A			01/14/15 13:04	
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	90	110			
Lab ID: C15010101-002CMS	Sample Matrix Spike					Run: TECHNICON_150114A			01/14/15 13:25	
Nitrogen, Ammonia as N		32.7	mg/L	0.50	105	90	110			
Lab ID: C15010101-002CMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150114A			01/14/15 13:27	
Nitrogen, Ammonia as N		32.5	mg/L	0.50	104	90	110	0.6	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 02/27/15
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H103533	
Lab ID: **AS-ICV 25ppb-1/20/20**		Initial Calibration Verification Standard							01/20/15 12:05	
Arsenic-III		27.2	ug/L	5.0	109	87.6	114			
Lab ID: **AS-50.0-1/20/2015**		Continuing Calibration Verification Standard							01/20/15 12:17	
Arsenic-III		51.1	ug/L	5.0	102	85	115			
Method: **E1632AM**									Batch: H_R103533	
Lab ID: **AS-LFB 50ppb-1/20/2**		Laboratory Fortified Blank				Run: SUB-H103533			01/20/15 12:41	
Arsenic-III		48.6	ug/L	5.0	97	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H103533			01/20/15 12:53	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15010153-001E**		Sample Matrix Spike				Run: SUB-H103533			01/20/15 13:17	
Arsenic-III		50.0	ug/L	5.0	100	55	146			
Lab ID: **C15010153-001E**		Sample Matrix Spike Duplicate				Run: SUB-H103533			01/20/15 13:29	
Arsenic-III		51.7	ug/L	5.0	103	55	146	3.2	20	
Method: **E1632AM**									Analytical Run: SUB-H103615	
Lab ID: **AS-ICV 25ppb-1/21/20**		Initial Calibration Verification Standard							01/22/15 12:23	
Arsenic-III		25.1	ug/L	5.0	101	87.6	114			
Lab ID: **AS-50.0-1/21/2015**		Continuing Calibration Verification Standard							01/22/15 12:35	
Arsenic-III		50.4	ug/L	5.0	101	85	115			
Method: **E1632AM**									Batch: H_R103615	
Lab ID: **AS-LFB 50ppb-1/21/2**		Laboratory Fortified Blank				Run: SUB-H103615			01/22/15 12:59	
Arsenic-III		47.8	ug/L	5.0	96	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H103615			01/22/15 13:11	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15010192-010E**		Sample Matrix Spike				Run: SUB-H103615			01/22/15 16:25	
Arsenic-III		44.7	ug/L	5.0	89	55	146			
Lab ID: **C15010192-010E**		Sample Matrix Spike Duplicate				Run: SUB-H103615			01/22/15 16:37	
Arsenic-III		47.6	ug/L	5.0	95	55	146	6.2	20	
Lab ID: **H15010122-011E MS**		Sample Matrix Spike				Run: SUB-H103615			01/22/15 13:35	
Arsenic-III		51.9	ug/L	5.0	104	55	146			
Lab ID: **H15010122-011E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H103615			01/22/15 13:47	
Arsenic-III		49.4	ug/L	5.0	99	55	146	4.8	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 02/27/15
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150109A	
Lab ID: ICV	4	Initial Calibration Verification Standard							01/09/15 11:28	
Calcium		50.1	mg/L	1.0	100	95	105			
Magnesium		49.8	mg/L	1.0	100	95	105			
Potassium		50.5	mg/L	1.0	101	95	105			
Sodium		50.0	mg/L	1.0	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							01/09/15 11:43	
Calcium		461	mg/L	1.0	92	80	120			
Magnesium		494	mg/L	1.0	99	80	120			
Potassium		0.00525	mg/L	1.0						
Sodium		0.110	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							01/09/15 11:47	
Calcium		461	mg/L	1.0	92	80	120			
Magnesium		495	mg/L	1.0	99	80	120			
Potassium		0.0107	mg/L	1.0						
Sodium		0.169	mg/L	1.0						
Method: E200.7									Batch: R195049	
Lab ID: MB-150109A	4	Method Blank				Run: ICP4-C_150109A			01/09/15 12:06	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		0.03	mg/L	0.01						
Lab ID: LFB-150109A	4	Laboratory Fortified Blank				Run: ICP4-C_150109A			01/09/15 12:10	
Calcium		47.1	mg/L	1.0	94	85	115			
Magnesium		45.9	mg/L	1.0	92	85	115			
Potassium		52.2	mg/L	1.0	104	85	115			
Sodium		49.0	mg/L	1.0	98	85	115			
Lab ID: C15010153-002BMS2	4	Sample Matrix Spike				Run: ICP4-C_150109A			01/09/15 15:11	
Calcium		888	mg/L	1.0	87	70	130			
Magnesium		624	mg/L	1.0	93	70	130			
Potassium		259	mg/L	1.0	97	70	130			
Sodium		394	mg/L	1.2	94	70	130			
Lab ID: C15010153-002BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150109A			01/09/15 15:15	
Calcium		883	mg/L	1.0	85	70	130	0.6	20	
Magnesium		620	mg/L	1.0	92	70	130	0.6	20	
Potassium		260	mg/L	1.0	98	70	130	0.4	20	
Sodium		394	mg/L	1.2	94	70	130	0.1	20	
Lab ID: C15010153-011BMS2	4	Sample Matrix Spike				Run: ICP4-C_150109A			01/09/15 16:05	
Calcium		728	mg/L	1.0	89	70	130			
Magnesium		691	mg/L	1.0	92	70	130			
Potassium		252	mg/L	1.0	94	70	130			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R195049
Lab ID: C15010153-011BMS2	4	Sample Matrix Spike				Run: ICP4-C_150109A				01/09/15 16:05
Sodium		484	mg/L	1.2	93	70	130			
Lab ID: C15010153-011BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150109A				01/09/15 16:09
Calcium		723	mg/L	1.0	87	70	130	0.7	20	
Magnesium		688	mg/L	1.0	91	70	130	0.3	20	
Potassium		249	mg/L	1.0	94	70	130	0.9	20	
Sodium		482	mg/L	1.2	92	70	130	0.3	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150120A	
Lab ID: ICV	4	Initial Calibration Verification Standard							01/20/15 12:52	
Calcium		50.1	mg/L	1.0	100	95	105			
Magnesium		50.4	mg/L	1.0	101	95	105			
Potassium		51.2	mg/L	1.0	102	95	105			
Sodium		50.3	mg/L	1.0	101	95	105			
Lab ID: ICSA	4	Interference Check Sample A							01/20/15 13:07	
Calcium		465	mg/L	1.0	93	80	120			
Magnesium		505	mg/L	1.0	101	80	120			
Potassium		-0.0155	mg/L	1.0						
Sodium		0.0202	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							01/20/15 13:11	
Calcium		466	mg/L	1.0	93	80	120			
Magnesium		504	mg/L	1.0	101	80	120			
Potassium		-0.00869	mg/L	1.0						
Sodium		0.00531	mg/L	1.0						
Method: E200.7										Batch: R195348
Lab ID: MB-150120A	4	Method Blank				Run: ICP4-C_150120A			01/20/15 13:30	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		0.04	mg/L	0.01						
Lab ID: LFB-150120A	4	Laboratory Fortified Blank				Run: ICP4-C_150120A			01/20/15 13:34	
Calcium		48.2	mg/L	1.0	96	85	115			
Magnesium		47.5	mg/L	1.0	95	85	115			
Potassium		51.7	mg/L	1.0	103	85	115			
Sodium		49.6	mg/L	1.0	99	85	115			
Lab ID: C15010405-001BMS2	4	Sample Matrix Spike				Run: ICP4-C_150120A			01/20/15 17:51	
Calcium		619	mg/L	1.0	90	70	130			
Magnesium		351	mg/L	1.0	95	70	130			
Potassium		264	mg/L	1.0	100	70	130			
Sodium		804	mg/L	1.2	82	70	130			
Lab ID: C15010405-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150120A			01/20/15 18:06	
Calcium		628	mg/L	1.0	94	70	130	1.4	20	
Magnesium		356	mg/L	1.0	97	70	130	1.4	20	
Potassium		275	mg/L	1.0	104	70	130	3.9	20	
Sodium		828	mg/L	1.2	92	70	130	2.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150112A	
Lab ID: ICV	10 Initial Calibration Verification Standard								01/12/15 14:39	
Aluminum		0.0513	mg/L	0.0010	103	90	110			
Beryllium		0.0503	mg/L	0.0010	101	90	110			
Cadmium		0.0507	mg/L	0.0010	101	90	110			
Cobalt		0.0507	mg/L	0.0010	101	90	110			
Lead		0.0511	mg/L	0.0010	102	90	110			
Manganese		0.0503	mg/L	0.0010	101	90	110			
Molybdenum		0.0499	mg/L	0.0010	100	90	110			
Nickel		0.0512	mg/L	0.0010	102	90	110			
Uranium		0.0512	mg/L	0.00030	102	90	110			
Vanadium		0.0508	mg/L	0.0010	102	90	110			
Method: E200.8									Batch: 43632	
Lab ID: MB-43632	10 Method Blank					Run: ICPMS2-C_150112A			01/13/15 00:33	
Aluminum		0.001	mg/L	0.0005						
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	7E-05						
Molybdenum		ND	mg/L	8E-05						
Nickel		ND	mg/L	9E-05						
Uranium		ND	mg/L	9E-06						
Vanadium		0.003	mg/L	0.002						
Lab ID: LCS3-43632	10 Laboratory Control Sample					Run: ICPMS2-C_150112A			01/13/15 00:36	
Aluminum		2.39	mg/L	0.030	95	85	115			
Beryllium		0.239	mg/L	0.0010	96	85	115			
Cadmium		0.246	mg/L	0.0010	98	85	115			
Cobalt		0.477	mg/L	0.0050	95	85	115			
Lead		0.512	mg/L	0.0010	102	85	115			
Manganese		2.46	mg/L	0.0010	98	85	115			
Molybdenum		0.513	mg/L	0.0010	103	85	115			
Nickel		0.474	mg/L	0.0050	95	85	115			
Uranium		0.538	mg/L	0.00030	108	85	115			
Vanadium		0.505	mg/L	0.010	100	85	115			
Lab ID: C15010153-005CMS3	10 Sample Matrix Spike					Run: ICPMS2-C_150112A			01/13/15 01:00	
Aluminum		2.44	mg/L	0.030	97	70	130			
Beryllium		0.221	mg/L	0.0010	88	70	130			
Cadmium		0.247	mg/L	0.0010	98	70	130			
Cobalt		0.471	mg/L	0.0050	94	70	130			
Lead		0.520	mg/L	0.0010	104	70	130			
Manganese		3.62	mg/L	0.0010	98	70	130			
Molybdenum		0.541	mg/L	0.0010	108	70	130			
Nickel		0.502	mg/L	0.0050	97	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 43632
Lab ID: C15010153-005CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_150112A				01/13/15 01:00
Uranium		0.685	mg/L	0.00030	111	70	130			
Vanadium		0.514	mg/L	0.010	103	70	130			
Lab ID: C15010154-001CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_150112A				01/13/15 02:03
Aluminum		2.51	mg/L	0.030	100	70	130			
Beryllium		0.265	mg/L	0.0010	106	70	130			
Cadmium		0.244	mg/L	0.0010	98	70	130			
Cobalt		0.476	mg/L	0.0050	95	70	130			
Lead		0.513	mg/L	0.0010	103	70	130			
Manganese		2.42	mg/L	0.0010	97	70	130			
Molybdenum		0.519	mg/L	0.0010	104	70	130			
Nickel		0.464	mg/L	0.0050	93	70	130			
Uranium		0.544	mg/L	0.00030	109	70	130			
Vanadium		0.499	mg/L	0.010	99	70	130			
Lab ID: C15010154-001CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150112A				01/13/15 02:06
Aluminum		2.45	mg/L	0.030	98	70	130	2.2	20	
Beryllium		0.259	mg/L	0.0010	104	70	130	2.2	20	
Cadmium		0.243	mg/L	0.0010	97	70	130	0.4	20	
Cobalt		0.472	mg/L	0.0050	94	70	130	0.9	20	
Lead		0.509	mg/L	0.0010	102	70	130	0.8	20	
Manganese		2.42	mg/L	0.0010	96	70	130	0.2	20	
Molybdenum		0.516	mg/L	0.0010	103	70	130	0.6	20	
Nickel		0.455	mg/L	0.0050	91	70	130	2.0	20	
Uranium		0.541	mg/L	0.00030	108	70	130	0.6	20	
Vanadium		0.492	mg/L	0.010	98	70	130	1.4	20	
Method: E200.8										Analytical Run: ICPMS2-C_150115B
Lab ID: ICV		Initial Calibration Verification Standard								01/15/15 14:37
Beryllium		0.0490	mg/L	0.0010	98	90	110			
Method: E200.8										Batch: 43632
Lab ID: MB-43632		Method Blank				Run: ICPMS2-C_150115B				01/15/15 18:00
Beryllium		ND	mg/L	4E-05						
Lab ID: LCS3-43632		Laboratory Control Sample				Run: ICPMS2-C_150115B				01/15/15 18:03
Beryllium		0.235	mg/L	0.0010	94	85	115			
Lab ID: C15010153-005CMS3		Sample Matrix Spike				Run: ICPMS2-C_150115B				01/15/15 18:13
Beryllium		0.225	mg/L	0.0010	90	70	130			
Lab ID: C15010153-005CMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_150115B				01/15/15 18:16
Beryllium		0.219	mg/L	0.0010	88	70	130	2.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150108A	
Lab ID: ICV	2	Initial Calibration Verification Standard							01/08/15 15:05	
Chloride		9.53	mg/L	1.0	95	90	110			
Sulfate		38.0	mg/L	1.0	95	90	110			
Lab ID: CCV-010615-2	2	Continuing Calibration Verification Standard							01/08/15 19:27	
Chloride		9.21	mg/L	1.0	92	90	110			
Sulfate		36.9	mg/L	1.0	92	90	110			
Lab ID: CCV-010615-4	2	Continuing Calibration Verification Standard							01/09/15 01:50	
Chloride		10.7	mg/L	1.0	107	90	110			
Sulfate		36.9	mg/L	1.0	92	90	110			
Method: E300.0									Batch: R195017	
Lab ID: ICB	2	Method Blank				Run: IC1-C_150108A			01/08/15 15:23	
Chloride		ND	mg/L	0.04						
Sulfate		0.1	mg/L	0.1						
Lab ID: LFB-010615-1	2	Laboratory Fortified Blank				Run: IC1-C_150108A			01/08/15 15:40	
Chloride		9.66	mg/L	1.0	97	90	110			
Sulfate		38.3	mg/L	1.0	95	90	110			
Lab ID: C15010152-001AMS	2	Sample Matrix Spike				Run: IC1-C_150108A			01/09/15 00:23	
Chloride		11700	mg/L	21		90	110			A
Sulfate		7560	mg/L	83	94	90	110			
Lab ID: C15010152-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150108A			01/09/15 00:58	
Chloride		11600	mg/L	21		90	110	0.1	20	A
Sulfate		7640	mg/L	83	95	90	110	1.1	20	
Lab ID: C15010153-003AMS	2	Sample Matrix Spike				Run: IC1-C_150108A			01/09/15 07:41	
Chloride		376	mg/L	2.1	109	90	110			
Sulfate		4010	mg/L	8.3		90	110			A
Lab ID: C15010153-003AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150108A			01/09/15 07:58	
Chloride		371	mg/L	2.1	106	90	110	1.4	20	
Sulfate		3970	mg/L	8.3		90	110	0.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15
Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150109B	
Lab ID: CCV-30	Continuing Calibration Verification Standard								01/09/15 15:47	
Nitrogen, Nitrate+Nitrite as N		1.05	mg/L	0.10	105	90	110			
Method: E353.2									Batch: R195028	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150109B			01/09/15 14:35	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150109B			01/09/15 14:40	
Nitrogen, Nitrate+Nitrite as N		2.07	mg/L	0.10	106	90	110			
Lab ID: C15010112-006DMS	Sample Matrix Spike					Run: TECHNICON_150109B			01/09/15 15:55	
Nitrogen, Nitrate+Nitrite as N		4.26	mg/L	0.10	96	90	110			
Lab ID: C15010112-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150109B			01/09/15 15:57	
Nitrogen, Nitrate+Nitrite as N		4.36	mg/L	0.10	102	90	110	2.3	10	
Method: E353.2									Analytical Run: TECHNICON_150112A	
Lab ID: CCV-12	Continuing Calibration Verification Standard								01/12/15 12:24	
Nitrogen, Nitrate+Nitrite as N		1.01	mg/L	0.10	101	90	110			
Method: E353.2									Batch: R195061	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150112A			01/12/15 11:56	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150112A			01/12/15 12:01	
Nitrogen, Nitrate+Nitrite as N		2.08	mg/L	0.10	106	90	110			
Lab ID: C15010153-006DMS	Sample Matrix Spike					Run: TECHNICON_150112A			01/12/15 12:31	
Nitrogen, Nitrate+Nitrite as N		107	mg/L	2.5	101	90	110			
Lab ID: C15010153-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150112A			01/12/15 12:34	
Nitrogen, Nitrate+Nitrite as N		103	mg/L	2.5	93	90	110	3.8	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R195022	
Lab ID: 010815_CCV_3	9	Continuing Calibration Verification Standard							01/08/15 16:32	
Bromodichloromethane		11.0	ug/L	1.0	110	70	130			
Bromoform		9.56	ug/L	1.0	96	70	130			
Chlorodibromomethane		9.52	ug/L	1.0	95	70	130			
Chloroform		10.3	ug/L	1.0	103	70	130			
Trihalomethanes, Total		40.4	ug/L	1.0	101	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	102	70	130			
Surr: Dibromofluoromethane				1.0	104	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	109	70	130			
Lab ID: 010815_CCV_20	9	Continuing Calibration Verification Standard							01/09/15 02:30	
Bromodichloromethane		10.5	ug/L	1.0	105	70	130			
Bromoform		9.36	ug/L	1.0	94	70	130			
Chlorodibromomethane		9.16	ug/L	1.0	92	70	130			
Chloroform		10.2	ug/L	1.0	102	70	130			
Trihalomethanes, Total		39.2	ug/L	1.0	98	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	70	130			
Surr: Dibromofluoromethane				1.0	106	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	107	70	130			
Method: E624									Batch: R195022	
Lab ID: 010815_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_150108A			01/08/15 17:07	
Bromodichloromethane		11.0	ug/L	1.0	110	60	130			
Bromoform		9.52	ug/L	1.0	95	60	142			
Chlorodibromomethane		9.72	ug/L	1.0	97	67	134			
Chloroform		9.84	ug/L	1.0	98	56	135			
Trihalomethanes, Total		40.1	ug/L	1.0	100	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	101	70	130			
Surr: Dibromofluoromethane				1.0	104	43	142			
Surr: p-Bromofluorobenzene				1.0	105	70	130			
Surr: Toluene-d8				1.0	110	70	130			
Lab ID: 010815_MBLK_6	9	Method Blank				Run: SATURNCA_150108A			01/08/15 18:19	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	104	73.7	126			
Surr: Dibromofluoromethane				1.0	103	64.4	131			
Surr: p-Bromofluorobenzene				1.0	102	67.1	133			
Surr: Toluene-d8				1.0	108	79.7	125			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195022
Lab ID: C15010110-001AMS	9	Sample Matrix Spike				Run: SATURNCA_150108A				01/09/15 10:06
Bromodichloromethane		214	ug/L	10	107	60	130			
Bromoform		193	ug/L	10	96	60	142			
Chlorodibromomethane		186	ug/L	10	93	67	134			
Chloroform		206	ug/L	10	103	56	135			
Trihalomethanes, Total		798	ug/L	10	100	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	106	43	142			
Surr: p-Bromofluorobenzene				1.0	113	70	130			
Surr: Toluene-d8				1.0	109	70	130			
Lab ID: C15010110-001AMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_150108A				01/09/15 10:41
Bromodichloromethane		215	ug/L	10	108	60	130	0.7	20	
Bromoform		202	ug/L	10	101	60	142	4.5	20	
Chlorodibromomethane		181	ug/L	10	90	67	134	3.1	20	
Chloroform		211	ug/L	10	106	56	135	2.7	20	
Trihalomethanes, Total		809	ug/L	10	101	70	130	1.3	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	106	43	142			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	109	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0843
Lab ID: MB-GA-0843	3	Method Blank				Run: BERTHOLD 770-2_150114A				01/14/15 18:59
Gross Alpha minus Rn & U		0.02	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: LCS-GA-0843		Laboratory Control Sample				Run: BERTHOLD 770-2_150114A				01/14/15 18:59
Gross Alpha minus Rn & U		48.4	pCi/L		128	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: C15010153-009GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_150114A				01/14/15 20:37
Gross Alpha minus Rn & U		77.0	pCi/L		100	70	130			
Lab ID: C15010153-009GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_150114A				01/14/15 20:37
Gross Alpha minus Rn & U		78.3	pCi/L		102	70	130	1.7	52.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7521
Lab ID: LCS-RA226-7521		Laboratory Control Sample				Run: G542M_150109B				01/19/15 10:07
Radium 226		13	pCi/L		112	80	120			
Lab ID: MB-RA226-7521	3	Method Blank				Run: G542M_150109B				01/19/15 10:07
Radium 226		0.03	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: C15010141-001AMS		Sample Matrix Spike				Run: G542M_150109B				01/19/15 10:07
Radium 226		25	pCi/L		106	70	130			
Lab ID: C15010141-001AMSD		Sample Matrix Spike Duplicate				Run: G542M_150109B				01/19/15 10:07
Radium 226		24	pCi/L		102	70	130	3.8	48.9	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2170	
Lab ID: LCS-RA-TH-ISO-2170		Laboratory Control Sample				Run: ALPHANALYST_150112A			01/20/15 09:28	
Thorium 230		5.4	pCi/L		82	80	120			
Lab ID: C15010153-007GMS		Sample Matrix Spike				Run: ALPHANALYST_150112A			01/20/15 09:29	
Thorium 230		14.0	pCi/L		100	70	130			
Lab ID: C15010153-007GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150112A			01/20/15 09:29	
Thorium 230		13.4	pCi/L		96	70	130	4.4	48	
Lab ID: MB-RA-TH-ISO-2170	3	Method Blank				Run: ALPHANALYST_150112A			01/20/15 09:29	
Thorium 230		0.04	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 02/27/15
Work Order: C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0518R	
Lab ID: MB-PB-210-0518	3	Method Blank				Run: SUB-T60904			01/21/15 09:58	
Lead 210		-0.1	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0518		Laboratory Control Sample				Run: SUB-T60904			01/21/15 11:35	
Lead 210		22	pCi/L		98	80	120			
Lab ID: C15010153-001FMS		Sample Matrix Spike				Run: SUB-T60904			01/21/15 14:38	
Lead 210		31	pCi/L		140	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Lab ID: C15010153-001FMSD		Sample Matrix Spike Duplicate				Run: SUB-T60904			01/21/15 16:10	
Lead 210		28	pCi/L		125	70	130	11	42.8	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010153

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05									Batch: RA228-4856	
Lab ID: LCS-228-RA226-7521		Laboratory Control Sample				Run: TENNELEC-3_150109B			01/14/15 10:51	
Radium 228		7.4	pCi/L		102	80	120			
Lab ID: MB-RA226-7521	3	Method Blank				Run: TENNELEC-3_150109B			01/14/15 10:51	
Radium 228		0.7	pCi/L							U
Radium 228 precision (±)		0.8	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15010183-001DMS		Sample Matrix Spike				Run: TENNELEC-3_150109B			01/14/15 10:51	
Radium 228		16	pCi/L		113	70	130			
Lab ID: C15010183-001DMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150109B			01/14/15 10:51	
Radium 228		14	pCi/L		98	70	130	13	52.3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

ENERGY LABORATORIES
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ANALYTICAL SUMMARY REPORT

February 27, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15010193 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 5 samples for United Nuclear Corporation on 1/9/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010193-001	624	01/06/15 9:55	01/09/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15010193-002	SBL-1	01/06/15 10:25	01/09/15	Aqueous	Same As Above
C15010193-003	GW-3	01/06/15 11:30	01/09/15	Aqueous	Same As Above
C15010193-004	EPA-25	01/06/15 12:40	01/09/15	Aqueous	Same As Above
C15010193-005	627	01/06/15 13:35	01/09/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2015.02.27 10:43:29 -07:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Sample Delivery Group: C15010193

Report Date: 02/27/15

CASE NARRATIVE

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R195031
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150109B				01/09/15 14:05
Alkalinity, Total as CaCO3		ND	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_141001		Laboratory Control Sample				Run: MANTECH_150109B				01/09/15 14:18
Alkalinity, Total as CaCO3		249	mg/L	5.0	100	90	110			
Lab ID: C15010157-001ADUP	2	Sample Duplicate				Run: MANTECH_150109B				01/09/15 14:33
Alkalinity, Total as CaCO3		384	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		468	mg/L	5.0				0.1	10	
Lab ID: C15010164-001BMS		Sample Matrix Spike				Run: MANTECH_150109B				01/09/15 14:58
Alkalinity, Total as CaCO3		379	mg/L	5.0	90	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS150109A
Lab ID: MB-1_150109A		Method Blank				Run: BAL-18_150109A				01/09/15 12:41
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_150109A		Laboratory Control Sample				Run: BAL-18_150109A				01/09/15 12:41
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	11	100	90	110			
Lab ID: C15010170-001A DUP		Sample Duplicate				Run: BAL-18_150109A				01/09/15 12:41
Solids, Total Dissolved TDS @ 180 C		2230	mg/L	20				0.3	5	
Lab ID: C15010189-001A MS		Sample Matrix Spike				Run: BAL-18_150109A				01/09/15 12:42
Solids, Total Dissolved TDS @ 180 C		3610	mg/L	20	103	90	110			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150123C	
Lab ID: ICV		Initial Calibration Verification Standard							01/23/15 10:54	
Selenium-IV		0.0265	mg/L	0.0010	106	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							01/23/15 11:13	
Selenium-IV		0.0261	mg/L	0.0010	104	90	110			
Method: A3114 B									Batch: 43756	
Lab ID: MB-43756		Method Blank				Run: CVAA-C202_150123C			01/23/15 10:58	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-43756		Laboratory Control Sample				Run: CVAA-C202_150123C			01/23/15 11:00	
Selenium-IV		0.0256	mg/L	0.0010	103	90	110			
Lab ID: C15010193-001CMS		Sample Matrix Spike				Run: CVAA-C202_150123C			01/23/15 11:26	
Selenium-IV		0.0255	mg/L	0.0010	102	85	115			
Lab ID: C15010193-001CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150123C			01/23/15 11:27	
Selenium-IV		0.0250	mg/L	0.0010	100	85	115	1.7	10	

Qualifiers:

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MDC - Minimum detectable concentration
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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150109A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								01/09/15 08:37	
pH		6.84	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								01/09/15 13:43	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R195011	
Lab ID: **C15010157-001ADUP**	Sample Duplicate					Run: PHSC_101-C_150109A			01/09/15 12:39	
pH		6.21	s.u.	0.010				0.2	3	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150114A	
Lab ID: CCV-28		Continuing Calibration Verification Standard							01/14/15 13:45	
Nitrogen, Ammonia as N		0.987	mg/L	0.050	99	90	110			
Method: A4500-NH3 G									Batch: R195158	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150114A			01/14/15 13:00	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150114A			01/14/15 13:04	
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	90	110			
Lab ID: C15010212-001CMS		Sample Matrix Spike				Run: TECHNICON_150114A			01/14/15 14:15	
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110			
Lab ID: C15010212-001CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150114A			01/14/15 14:17	
Nitrogen, Ammonia as N		1.88	mg/L	0.050	96	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H103615	
Lab ID: **AS-ICV 25ppb-1/21/20**		Initial Calibration Verification Standard							01/22/15 12:23	
Arsenic-III		25.1	ug/L	5.0	101	87.6	114			
Lab ID: **AS-50.0-1/21/2015**		Continuing Calibration Verification Standard							01/22/15 15:49	
Arsenic-III		45.6	ug/L	5.0	91	85	115			
Method: **E1632AM**									Batch: H_R103615	
Lab ID: **AS-LFB 50ppb-1/21/2**		Laboratory Fortified Blank				Run: SUB-H103615			01/22/15 12:59	
Arsenic-III		47.8	ug/L	5.0	96	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H103615			01/22/15 13:11	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **H15010122-011E MS**		Sample Matrix Spike				Run: SUB-H103615			01/22/15 13:35	
Arsenic-III		51.9	ug/L	5.0	104	55	146			
Lab ID: **H15010122-011E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H103615			01/22/15 13:47	
Arsenic-III		49.4	ug/L	5.0	99	55	146	4.8	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150112A	
Lab ID: ICV	4	Initial Calibration Verification Standard							01/12/15 13:24	
Calcium		50.1	mg/L	1.0	100	95	105			
Magnesium		49.7	mg/L	1.0	99	95	105			
Potassium		49.9	mg/L	1.0	100	95	105			
Sodium		49.7	mg/L	1.0	99	95	105			
Lab ID: ICSA	4	Interference Check Sample A							01/12/15 13:39	
Calcium		463	mg/L	1.0	93	80	120			
Magnesium		494	mg/L	1.0	99	80	120			
Potassium		-0.0224	mg/L	1.0						
Sodium		0.0109	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							01/12/15 13:43	
Calcium		461	mg/L	1.0	92	80	120			
Magnesium		495	mg/L	1.0	99	80	120			
Potassium		-0.0203	mg/L	1.0						
Sodium		0.0800	mg/L	1.0						
Method: E200.7									Batch: R195086	
Lab ID: MB-150112A	4	Method Blank				Run: ICP4-C_150112A			01/12/15 14:01	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		0.03	mg/L	0.01						
Lab ID: LFB-150112A	4	Laboratory Fortified Blank				Run: ICP4-C_150112A			01/12/15 14:05	
Calcium		48.0	mg/L	1.0	96	85	115			
Magnesium		46.9	mg/L	1.0	94	85	115			
Potassium		54.2	mg/L	1.0	108	85	115			
Sodium		50.6	mg/L	1.0	101	85	115			
Lab ID: C15010193-005BMS2	4	Sample Matrix Spike				Run: ICP4-C_150112A			01/12/15 18:58	
Calcium		747	mg/L	1.0	90	70	130			
Magnesium		461	mg/L	1.0	94	70	130			
Potassium		240	mg/L	1.0	92	70	130			
Sodium		618	mg/L	1.2	93	70	130			
Lab ID: C15010193-005BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150112A			01/12/15 19:02	
Calcium		746	mg/L	1.0	90	70	130	0.2	20	
Magnesium		465	mg/L	1.0	96	70	130	0.9	20	
Potassium		239	mg/L	1.0	92	70	130	0.5	20	
Sodium		619	mg/L	1.2	93	70	130	0.2	20	

Qualifiers:

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MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150114A	
Lab ID: ICV	7	Initial Calibration Verification Standard							01/14/15 11:44	
Aluminum		5.01	mg/L	0.10	100	95	105			
Beryllium		0.499	mg/L	0.010	100	95	105			
Cobalt		0.948	mg/L	0.010	95	95	105			
Manganese		4.83	mg/L	0.010	97	95	105			
Molybdenum		0.978	mg/L	0.10	98	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Vanadium		0.976	mg/L	0.10	98	95	105			
Lab ID: ICSA	7	Interference Check Sample A							01/14/15 11:58	
Aluminum		472	mg/L	0.10	94	80	120			
Beryllium		3.00E-05	mg/L	0.010						
Cobalt		-0.00674	mg/L	0.010						
Manganese		-0.0202	mg/L	0.010						
Molybdenum		0.00629	mg/L	0.10						
Nickel		0.00556	mg/L	0.050						
Vanadium		-0.00111	mg/L	0.10						
Lab ID: ICSAB	7	Interference Check Sample AB							01/14/15 12:03	
Aluminum		478	mg/L	0.10	96	80	120			
Beryllium		0.463	mg/L	0.010	93	80	120			
Cobalt		0.421	mg/L	0.010	84	80	120			
Manganese		0.419	mg/L	0.010	84	80	120			
Molybdenum		0.00471	mg/L	0.10						
Nickel		0.852	mg/L	0.050	85	80	120			
Vanadium		0.498	mg/L	0.10	100	80	120			
Method: E200.7									Batch: 43651	
Lab ID: MB-43651	7	Method Blank				Run: ICP4-C_150114A			01/14/15 13:10	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Cobalt		ND	mg/L	0.005						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-43651	7	Laboratory Control Sample				Run: ICP4-C_150114A			01/14/15 13:14	
Aluminum		2.45	mg/L	0.030	98	85	115			
Beryllium		0.242	mg/L	0.0010	97	85	115			
Cobalt		0.477	mg/L	0.0052	95	85	115			
Manganese		2.40	mg/L	0.0012	96	85	115			
Molybdenum		0.493	mg/L	0.0053	99	85	115			
Nickel		0.476	mg/L	0.0050	95	85	115			
Vanadium		0.485	mg/L	0.010	97	85	115			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 43651
Lab ID: C15010192-011CMS3	7	Sample Matrix Spike				Run: ICP4-C_150114A				01/14/15 14:12
Aluminum		2.46	mg/L	0.030	98	70	130			
Beryllium		0.242	mg/L	0.0010	97	70	130			
Cobalt		0.476	mg/L	0.0052	95	70	130			
Manganese		2.40	mg/L	0.0012	96	70	130			
Molybdenum		0.496	mg/L	0.0053	99	70	130			
Nickel		0.475	mg/L	0.0050	95	70	130			
Vanadium		0.483	mg/L	0.010	97	70	130			
Lab ID: C15010192-011CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150114A				01/14/15 14:16
Aluminum		2.48	mg/L	0.030	99	70	130	0.9	20	
Beryllium		0.244	mg/L	0.0010	98	70	130	1.0	20	
Cobalt		0.479	mg/L	0.0052	96	70	130	0.6	20	
Manganese		2.42	mg/L	0.0012	97	70	130	1.0	20	
Molybdenum		0.499	mg/L	0.0053	100	70	130	0.7	20	
Nickel		0.479	mg/L	0.0050	96	70	130	0.8	20	
Vanadium		0.486	mg/L	0.010	97	70	130	0.7	20	

Qualifiers:

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MDC - Minimum detectable concentration

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150114A	
Lab ID: ICV	4	Initial Calibration Verification Standard							01/14/15 12:24	
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Cobalt		0.0498	mg/L	0.0010	100	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Uranium		0.0500	mg/L	0.00030	100	90	110			
Method: E200.8									Batch: 43651	
Lab ID: MB-43651	4	Method Blank				Run: ICPMS2-C_150114A			01/14/15 21:38	
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Uranium		1E-05	mg/L	9E-06						
Lab ID: LCS3-43651	4	Laboratory Control Sample				Run: ICPMS2-C_150114A			01/14/15 21:42	
Cadmium		0.250	mg/L	0.0010	100	85	115			
Cobalt		0.463	mg/L	0.0050	93	85	115			
Lead		0.504	mg/L	0.0010	101	85	115			
Uranium		0.529	mg/L	0.00030	106	85	115			
Lab ID: C15010192-011CMS3	4	Sample Matrix Spike				Run: ICPMS2-C_150114A			01/14/15 23:11	
Cadmium		0.246	mg/L	0.0010	99	70	130			
Cobalt		0.473	mg/L	0.0050	95	70	130			
Lead		0.510	mg/L	0.0010	102	70	130			
Uranium		0.535	mg/L	0.00030	107	70	130			
Lab ID: C15010192-011CMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150114A			01/14/15 23:14	
Cadmium		0.246	mg/L	0.0010	98	70	130	0.1	20	
Cobalt		0.471	mg/L	0.0050	94	70	130	0.3	20	
Lead		0.508	mg/L	0.0010	101	70	130	0.6	20	
Uranium		0.533	mg/L	0.00030	107	70	130	0.5	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_150109A	
Lab ID: ICV	2	Initial Calibration Verification Standard							01/09/15 12:41	
Chloride		10.4	mg/L	1.0	104	90	110			
Sulfate		41.0	mg/L	1.0	103	90	110			
Lab ID: CCV-010914-3	2	Continuing Calibration Verification Standard							01/09/15 20:55	
Chloride		10.6	mg/L	1.0	106	90	110			
Sulfate		42.0	mg/L	1.0	105	90	110			
Lab ID: CCV-010914-4	2	Continuing Calibration Verification Standard							01/10/15 00:31	
Chloride		10.7	mg/L	1.0	107	90	110			
Sulfate		42.5	mg/L	1.0	106	90	110			
Method: E300.0									Batch: R195032	
Lab ID: ICB	2	Method Blank				Run: IC2-C_150109A			01/09/15 12:57	
Chloride		ND	mg/L	0.01						
Sulfate		0.1	mg/L	0.05						
Lab ID: LFB-010914-1	2	Laboratory Fortified Blank				Run: IC2-C_150109A			01/09/15 13:12	
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		40.3	mg/L	1.0	100	90	110			
Lab ID: C15010193-005AMS	2	Sample Matrix Spike				Run: IC2-C_150109A			01/10/15 01:17	
Chloride		257	mg/L	2.1	108	90	110			
Sulfate		3120	mg/L	8.3	94	90	110			
Lab ID: C15010193-005AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150109A			01/10/15 01:32	
Chloride		259	mg/L	2.1	109	90	110	0.7	20	
Sulfate		3120	mg/L	8.3	94	90	110	0.1	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 02/27/15
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150112A	
Lab ID: CCV-26	Continuing Calibration Verification Standard								01/12/15 12:59	
Nitrogen, Nitrate+Nitrite as N		1.02	mg/L	0.10	102	90	110			
Lab ID: CCV-40	Continuing Calibration Verification Standard								01/12/15 13:34	
Nitrogen, Nitrate+Nitrite as N		1.03	mg/L	0.10	103	90	110			
Method: E353.2									Batch: R195061	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150112A			01/12/15 11:56	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150112A			01/12/15 12:01	
Nitrogen, Nitrate+Nitrite as N		2.08	mg/L	0.10	106	90	110			
Lab ID: C15010193-002DMS	Sample Matrix Spike					Run: TECHNICON_150112A			01/12/15 13:41	
Nitrogen, Nitrate+Nitrite as N		88.2	mg/L	2.5	105	90	110			
Lab ID: C15010193-002DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150112A			01/12/15 13:44	
Nitrogen, Nitrate+Nitrite as N		89.7	mg/L	2.5	108	90	110	1.7	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R195180	
Lab ID: 14-Jan-15_CCV_13	9	Continuing Calibration Verification Standard							01/14/15 16:12	
Bromodichloromethane		11.6	ug/L	1.0	116	70	130			
Bromoform		11.1	ug/L	1.0	111	70	130			
Chlorodibromomethane		11.4	ug/L	1.0	114	70	130			
Chloroform		10.7	ug/L	1.0	107	70	130			
Trihalomethanes, Total		44.8	ug/L	1.0	112	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	103	70	130			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	101	70	130			
Method: E624									Batch: R195180	
Lab ID: 14-Jan-15_LCS_14	9	Laboratory Control Sample				Run: 5975VOC1_150114C			01/14/15 16:47	
Bromodichloromethane		11.6	ug/L	1.0	116	60	130			
Bromoform		11.0	ug/L	1.0	110	60	142			
Chlorodibromomethane		11.6	ug/L	1.0	116	67	134			
Chloroform		10.2	ug/L	1.0	102	56	135			
Trihalomethanes, Total		44.5	ug/L	1.0	111	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	70	130			
Surr: Dibromofluoromethane				1.0	97	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	100	70	130			
Lab ID: 14-Jan-15_MBLK_16	9	Method Blank				Run: 5975VOC1_150114C			01/14/15 17:57	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	124	73.7	126			
Surr: Dibromofluoromethane				1.0	117	64.4	131			
Surr: p-Bromofluorobenzene				1.0	117	67.1	133			
Surr: Toluene-d8				1.0	98	79.7	125			
Lab ID: C15010192-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150114C			01/15/15 02:06	
Bromodichloromethane		120	ug/L	5.0	120	60	130			
Bromoform		110	ug/L	5.0	110	60	142			
Chlorodibromomethane		112	ug/L	5.0	112	67	134			
Chloroform		229	ug/L	5.0	120	56	135			
Trihalomethanes, Total		571	ug/L	5.0	116	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	111	70	130			
Surr: Dibromofluoromethane				1.0	117	43	142			
Surr: p-Bromofluorobenzene				1.0	113	70	130			
Surr: Toluene-d8				1.0	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195180
Lab ID: C15010192-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150114C				01/15/15 02:41
Bromodichloromethane		114	ug/L	5.0	114	60	130	5.5	20	
Bromoform		109	ug/L	5.0	109	60	142	0.7	20	
Chlorodibromomethane		110	ug/L	5.0	110	67	134	2.2	20	
Chloroform		223	ug/L	5.0	114	56	135	2.5	20	
Trihalomethanes, Total		556	ug/L	5.0	112	70	130	2.7	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	111	70	130			
Surr: Dibromofluoromethane				1.0	116	43	142			
Surr: p-Bromofluorobenzene				1.0	114	70	130			
Surr: Toluene-d8				1.0	103	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0843
Lab ID: MB-GA-0843	3	Method Blank				Run: BERTHOLD 770-2_150114A			01/14/15 18:59	
Gross Alpha minus Rn & U		0.02	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: LCS-GA-0843		Laboratory Control Sample				Run: BERTHOLD 770-2_150114A			01/14/15 18:59	
Gross Alpha minus Rn & U		48.4	pCi/L		128	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: C15010153-009GMS		Sample Matrix Spike				Run: BERTHOLD 770-2_150114A			01/14/15 20:37	
Gross Alpha minus Rn & U		77.0	pCi/L		100	70	130			
Lab ID: C15010153-009GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_150114A			01/14/15 20:37	
Gross Alpha minus Rn & U		78.3	pCi/L		102	70	130	1.7	52.9	
Method: E900.1										Batch: GA-0851
Lab ID: MB-GA-0851	3	Method Blank				Run: BERTHOLD 770-2_150130A			01/30/15 22:08	
Gross Alpha minus Rn & U		0.7	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.9	pCi/L							
Gross Alpha minus Rn & U MDC		1	pCi/L							
Lab ID: LCS-GA-0851		Laboratory Control Sample				Run: BERTHOLD 770-2_150130A			01/30/15 22:08	
Gross Alpha minus Rn & U		40.7	pCi/L		89	80	120			
Lab ID: C15010193-005GDUP	3	Sample Duplicate				Run: BERTHOLD 770-2_150130A			01/30/15 22:08	
Gross Alpha minus Rn & U		1.18	pCi/L					30	153.1	U
Gross Alpha minus Rn & U Precision (±)		0.969	pCi/L							
Gross Alpha minus Rn & U MDC		1.31	pCi/L							
Lab ID: C15010560-008CMS		Sample Matrix Spike				Run: BERTHOLD 770-2_150130A			01/30/15 23:44	
Gross Alpha minus Rn & U		35.8	pCi/L		76	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA226-7522	
Lab ID: LCS-RA226-7522		Laboratory Control Sample				Run: G542M_150112A			01/26/15 09:49	
Radium 226		12	pCi/L		104	80	120			
Lab ID: MB-RA226-7522	3	Method Blank				Run: G542M_150112A			01/26/15 09:49	
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: C15010192-001GMS		Sample Matrix Spike				Run: G542M_150112A			01/26/15 09:49	
Radium 226		24	pCi/L		101	70	130			
Lab ID: C15010192-001GMSD		Sample Matrix Spike Duplicate				Run: G542M_150112A			01/26/15 09:49	
Radium 226		23	pCi/L		99	70	130	1.3	48.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2172
Lab ID: LCS-RA-TH-ISO-2172		Laboratory Control Sample				Run: ALPHANALYST_150113A				01/19/15 09:45
Thorium 230		6.9	pCi/L		103	80	120			
Lab ID: C15010192-005GMS		Sample Matrix Spike				Run: ALPHANALYST_150113A				01/19/15 09:46
Thorium 230		14.0	pCi/L		104	70	130			
Lab ID: C15010192-005GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150113A				01/19/15 09:46
Thorium 230		14.1	pCi/L		105	70	130	0.6	48	
Lab ID: MB-RA-TH-ISO-2172	3	Method Blank				Run: ALPHANALYST_150113A				01/19/15 15:55
Thorium 230		0.08	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: SW Alluvium **Work Order:** C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0519	
Lab ID: MB-PB-210-0519	3	Method Blank				Run: SUB-T60929			01/22/15 12:59	
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0519		Laboratory Control Sample				Run: SUB-T60929			01/22/15 14:08	
Lead 210		23	pCi/L		103	80	120			
Lab ID: T15010038-001FMS		Sample Matrix Spike				Run: SUB-T60929			01/22/15 16:27	
Lead 210		36	pCi/L		90	70	130			
Lab ID: T15010038-001FMSD		Sample Matrix Spike Duplicate				Run: SUB-T60929			01/22/15 17:36	
Lead 210		42	pCi/L		107	70	130	17	43.7	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: SW Alluvium
Work Order: C15010193

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4857
Lab ID: LCS-228-RA226-7522		Laboratory Control Sample				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		7.3	pCi/L		97	80	120			
Lab ID: MB-RA226-7522	3	Method Blank				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		1.0	pCi/L							
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15010192-002GMS		Sample Matrix Spike				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		15	pCi/L		83	70	130			
Lab ID: C15010192-002GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		16	pCi/L		91	70	130	6.7	50.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

ANALYTICAL SUMMARY REPORT

February 27, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15010192 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 1/9/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010192-001	614	01/06/15 14:48	01/09/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15010192-002	515-A	01/06/15 15:56	01/09/15	Aqueous	Same As Above
C15010192-003	604	01/06/15 16:48	01/09/15	Aqueous	Same As Above
C15010192-004	EPA-4	01/07/15 9:35	01/09/15	Aqueous	Same As Above
C15010192-005	EPA-5	01/07/15 10:32	01/09/15	Aqueous	Same As Above
C15010192-006	EPA-7	01/07/15 11:25	01/09/15	Aqueous	Same As Above
C15010192-007	EPA-2	01/07/15 12:15	01/09/15	Aqueous	Same As Above
C15010192-008	EPA-2 Duplicate	01/07/15 12:50	01/09/15	Aqueous	Same As Above
C15010192-009	TWQ-142	01/07/15 14:10	01/09/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C15010192-010	Rinsate	01/07/15 14:50 01/09/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved E624 Purgeable Organics
C15010192-011	Field Blank	01/07/15 15:00 01/09/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2015.02.27 11:57:02 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Sample Delivery Group: C15010192

Report Date: 02/27/15

CASE NARRATIVE

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R195031
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150109B				01/09/15 14:05
Alkalinity, Total as CaCO3		ND	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_141001		Laboratory Control Sample				Run: MANTECH_150109B				01/09/15 14:18
Alkalinity, Total as CaCO3		249	mg/L	5.0	100	90	110			
Lab ID: C15010157-001ADUP	2	Sample Duplicate				Run: MANTECH_150109B				01/09/15 14:33
Alkalinity, Total as CaCO3		384	mg/L	5.0				0.1	10	
Bicarbonate as HCO3		468	mg/L	5.0				0.1	10	
Lab ID: C15010164-001BMS		Sample Matrix Spike				Run: MANTECH_150109B				01/09/15 14:58
Alkalinity, Total as CaCO3		379	mg/L	5.0	90	80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**									Batch: TDS150109A	
Lab ID: **MB-1_150109A**		Method Blank				Run: BAL-18_150109A			01/09/15 12:41	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_150109A**		Laboratory Control Sample				Run: BAL-18_150109A			01/09/15 12:41	
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	11	100	90	110			
Lab ID: **C15010189-001A MS**		Sample Matrix Spike				Run: BAL-18_150109A			01/09/15 12:42	
Solids, Total Dissolved TDS @ 180 C		3610	mg/L	20	103	90	110			
Lab ID: **C15010192-009A DUP**		Sample Duplicate				Run: BAL-18_150109A			01/09/15 12:45	
Solids, Total Dissolved TDS @ 180 C		1350	mg/L	20				0.8	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150202A	
Lab ID: ICV		Initial Calibration Verification Standard							02/02/15 11:11	
Selenium-IV		0.0242	mg/L	0.0010	97	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							02/02/15 11:30	
Selenium-IV		0.0244	mg/L	0.0010	97	90	110			
Method: A3114 B									Batch: 43817	
Lab ID: MB-43817		Method Blank				Run: CVAA-C202_150202A			02/02/15 11:14	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-43817		Laboratory Control Sample				Run: CVAA-C202_150202A			02/02/15 11:16	
Selenium-IV		0.0238	mg/L	0.0010	95	90	110			
Lab ID: C15010192-004CMS		Sample Matrix Spike				Run: CVAA-C202_150202A			02/02/15 11:24	
Selenium-IV		0.0238	mg/L	0.0010	95	85	115			
Lab ID: C15010192-004CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150202A			02/02/15 11:25	
Selenium-IV		0.0240	mg/L	0.0010	96	85	115	0.7	10	
Lab ID: C15010192-011CMS		Sample Matrix Spike				Run: CVAA-C202_150202A			02/02/15 11:41	
Selenium-IV		0.0223	mg/L	0.0010	89	85	115			
Lab ID: C15010192-011CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150202A			02/02/15 11:42	
Selenium-IV		0.0227	mg/L	0.0010	91	85	115	1.4	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150109A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								01/09/15 08:37	
pH		6.84	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								01/09/15 13:43	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R195011	
Lab ID: **C15010192-006ADUP**	Sample Duplicate					Run: PHSC_101-C_150109A			01/09/15 13:09	
pH		6.24	s.u.	0.010				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 02/27/15
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R195105
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150113A				01/13/15 15:22
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150113A				01/13/15 15:26
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Lab ID: C15010166-001AMS		Sample Matrix Spike				Run: TECHNICON_150113A				01/13/15 15:41
Nitrogen, Ammonia as N		1.79	mg/L	0.050	91	90	110			
Lab ID: C15010166-001AMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150113A				01/13/15 15:42
Nitrogen, Ammonia as N		1.81	mg/L	0.050	92	90	110	1.1	10	
Method: A4500-NH3 G										Analytical Run: TECHNICON_150114A
Lab ID: CCV-12		Continuing Calibration Verification Standard								01/14/15 13:19
Nitrogen, Ammonia as N		1.01	mg/L	0.050	101	90	110			
Lab ID: CCV-28		Continuing Calibration Verification Standard								01/14/15 13:45
Nitrogen, Ammonia as N		0.987	mg/L	0.050	99	90	110			
Lab ID: CCV-43		Continuing Calibration Verification Standard								01/14/15 14:10
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Method: A4500-NH3 G										Batch: R195158
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150114A				01/14/15 13:00
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150114A				01/14/15 13:04
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	90	110			
Lab ID: C15010192-008DMS		Sample Matrix Spike				Run: TECHNICON_150114A				01/14/15 13:50
Nitrogen, Ammonia as N		2.42	mg/L	0.050	103	90	110			
Lab ID: C15010192-008DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150114A				01/14/15 13:52
Nitrogen, Ammonia as N		2.37	mg/L	0.050	100	90	110	2.1	10	
Lab ID: C15010212-001CMS		Sample Matrix Spike				Run: TECHNICON_150114A				01/14/15 14:15
Nitrogen, Ammonia as N		1.90	mg/L	0.050	97	90	110			
Lab ID: C15010212-001CMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150114A				01/14/15 14:17
Nitrogen, Ammonia as N		1.88	mg/L	0.050	96	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H103615	
Lab ID: **AS-ICV 25ppb-1/21/20**		Initial Calibration Verification Standard							01/22/15 12:23	
Arsenic-III		25.1	ug/L	5.0	101	87.6	114			
Lab ID: **AS-50.0-1/21/2015**		Continuing Calibration Verification Standard							01/22/15 15:49	
Arsenic-III		45.6	ug/L	5.0	91	85	115			
Lab ID: **AS-50.0-1/21/2015**		Continuing Calibration Verification Standard							01/22/15 12:35	
Arsenic-III		50.4	ug/L	5.0	101	85	115			
Method: **E1632AM**									Batch: H_R103615	
Lab ID: **AS-LFB 50ppb-1/21/2**		Laboratory Fortified Blank				Run: SUB-H103615			01/22/15 12:59	
Arsenic-III		47.8	ug/L	5.0	96	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H103615			01/22/15 13:11	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15010192-010E**		Sample Matrix Spike				Run: SUB-H103615			01/22/15 16:25	
Arsenic-III		44.7	ug/L	5.0	89	55	146			
Lab ID: **C15010192-010E**		Sample Matrix Spike Duplicate				Run: SUB-H103615			01/22/15 16:37	
Arsenic-III		47.6	ug/L	5.0	95	55	146	6.2	20	
Lab ID: **H15010122-011E MS**		Sample Matrix Spike				Run: SUB-H103615			01/22/15 13:35	
Arsenic-III		51.9	ug/L	5.0	104	55	146			
Lab ID: **H15010122-011E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H103615			01/22/15 13:47	
Arsenic-III		49.4	ug/L	5.0	99	55	146	4.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150112A	
Lab ID: ICV	4	Initial Calibration Verification Standard								01/12/15 13:24
Calcium		50.1	mg/L	1.0	100	95	105			
Magnesium		49.7	mg/L	1.0	99	95	105			
Potassium		49.9	mg/L	1.0	100	95	105			
Sodium		49.7	mg/L	1.0	99	95	105			
Lab ID: ICSA	4	Interference Check Sample A								01/12/15 13:39
Calcium		463	mg/L	1.0	93	80	120			
Magnesium		494	mg/L	1.0	99	80	120			
Potassium		-0.0224	mg/L	1.0						
Sodium		0.0109	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB								01/12/15 13:43
Calcium		461	mg/L	1.0	92	80	120			
Magnesium		495	mg/L	1.0	99	80	120			
Potassium		-0.0203	mg/L	1.0						
Sodium		0.0800	mg/L	1.0						
Method: E200.7										Batch: R195086
Lab ID: MB-150112A	4	Method Blank				Run: ICP4-C_150112A				01/12/15 14:01
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		0.03	mg/L	0.01						
Lab ID: LFB-150112A	4	Laboratory Fortified Blank				Run: ICP4-C_150112A				01/12/15 14:05
Calcium		48.0	mg/L	1.0	96	85	115			
Magnesium		46.9	mg/L	1.0	94	85	115			
Potassium		54.2	mg/L	1.0	108	85	115			
Sodium		50.6	mg/L	1.0	101	85	115			
Lab ID: C15010192-007BMS2	4	Sample Matrix Spike				Run: ICP4-C_150112A				01/12/15 18:06
Calcium		628	mg/L	1.0	90	70	130			
Magnesium		427	mg/L	1.0	94	70	130			
Potassium		242	mg/L	1.0	92	70	130			
Sodium		441	mg/L	1.2	92	70	130			
Lab ID: C15010192-007BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150112A				01/12/15 18:10
Calcium		625	mg/L	1.0	89	70	130	0.4	20	
Magnesium		425	mg/L	1.0	93	70	130	0.4	20	
Potassium		242	mg/L	1.0	92	70	130	0.3	20	
Sodium		440	mg/L	1.2	92	70	130	0.2	20	
Lab ID: C15010193-005BMS2	4	Sample Matrix Spike				Run: ICP4-C_150112A				01/12/15 18:58
Calcium		747	mg/L	1.0	90	70	130			
Magnesium		461	mg/L	1.0	94	70	130			
Potassium		240	mg/L	1.0	92	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R195086
Lab ID: C15010193-005BMS2	4	Sample Matrix Spike				Run: ICP4-C_150112A				01/12/15 18:58
Sodium		618	mg/L	1.2	93	70	130			
Lab ID: C15010193-005BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150112A				01/12/15 19:02
Calcium		746	mg/L	1.0	90	70	130	0.2	20	
Magnesium		465	mg/L	1.0	96	70	130	0.9	20	
Potassium		239	mg/L	1.0	92	70	130	0.5	20	
Sodium		619	mg/L	1.2	93	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150114A	
Lab ID: ICV	8	Initial Calibration Verification Standard							01/14/15 11:44	
Aluminum		5.01	mg/L	0.10	100	95	105			
Beryllium		0.499	mg/L	0.010	100	95	105			
Cadmium		0.478	mg/L	0.010	96	95	105			
Cobalt		0.948	mg/L	0.010	95	95	105			
Manganese		4.83	mg/L	0.010	97	95	105			
Molybdenum		0.978	mg/L	0.10	98	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Vanadium		0.976	mg/L	0.10	98	95	105			
Lab ID: ICSA	8	Interference Check Sample A							01/14/15 11:58	
Aluminum		472	mg/L	0.10	94	80	120			
Beryllium		3.00E-05	mg/L	0.010						
Cadmium		0.00436	mg/L	0.010						
Cobalt		-0.00674	mg/L	0.010						
Manganese		-0.0202	mg/L	0.010						
Molybdenum		0.00629	mg/L	0.10						
Nickel		0.00556	mg/L	0.050						
Vanadium		-0.00111	mg/L	0.10						
Lab ID: ICSAB	8	Interference Check Sample AB							01/14/15 12:03	
Aluminum		478	mg/L	0.10	96	80	120			
Beryllium		0.463	mg/L	0.010	93	80	120			
Cadmium		0.933	mg/L	0.010	93	80	120			
Cobalt		0.421	mg/L	0.010	84	80	120			
Manganese		0.419	mg/L	0.010	84	80	120			
Molybdenum		0.00471	mg/L	0.10						
Nickel		0.852	mg/L	0.050	85	80	120			
Vanadium		0.498	mg/L	0.10	100	80	120			
Method: E200.7									Batch: 43651	
Lab ID: MB-43651	8	Method Blank				Run: ICP4-C_150114A			01/14/15 13:10	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Cadmium		ND	mg/L	0.001						
Cobalt		ND	mg/L	0.005						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-43651	8	Laboratory Control Sample				Run: ICP4-C_150114A			01/14/15 13:14	
Aluminum		2.45	mg/L	0.030	98	85	115			
Beryllium		0.242	mg/L	0.0010	97	85	115			
Cadmium		0.242	mg/L	0.0012	97	85	115			
Cobalt		0.477	mg/L	0.0052	95	85	115			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 43651
Lab ID: LCS3-43651	8	Laboratory Control Sample				Run: ICP4-C_150114A				01/14/15 13:14
Manganese		2.40	mg/L	0.0012	96	85	115			
Molybdenum		0.493	mg/L	0.0053	99	85	115			
Nickel		0.476	mg/L	0.0050	95	85	115			
Vanadium		0.485	mg/L	0.010	97	85	115			
Lab ID: C15010192-011CMS3	8	Sample Matrix Spike				Run: ICP4-C_150114A				01/14/15 14:12
Aluminum		2.46	mg/L	0.030	98	70	130			
Beryllium		0.242	mg/L	0.0010	97	70	130			
Cadmium		0.242	mg/L	0.0012	97	70	130			
Cobalt		0.476	mg/L	0.0052	95	70	130			
Manganese		2.40	mg/L	0.0012	96	70	130			
Molybdenum		0.496	mg/L	0.0053	99	70	130			
Nickel		0.475	mg/L	0.0050	95	70	130			
Vanadium		0.483	mg/L	0.010	97	70	130			
Lab ID: C15010192-011CMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_150114A				01/14/15 14:16
Aluminum		2.48	mg/L	0.030	99	70	130	0.9	20	
Beryllium		0.244	mg/L	0.0010	98	70	130	1.0	20	
Cadmium		0.243	mg/L	0.0012	97	70	130	0.3	20	
Cobalt		0.479	mg/L	0.0052	96	70	130	0.6	20	
Manganese		2.42	mg/L	0.0012	97	70	130	1.0	20	
Molybdenum		0.499	mg/L	0.0053	100	70	130	0.7	20	
Nickel		0.479	mg/L	0.0050	96	70	130	0.8	20	
Vanadium		0.486	mg/L	0.010	97	70	130	0.7	20	
Lab ID: C15010200-001CMS3	8	Sample Matrix Spike				Run: ICP4-C_150114A				01/14/15 15:21
Aluminum		2.59	mg/L	0.030	103	70	130			
Beryllium		0.250	mg/L	0.0010	100	70	130			
Cadmium		0.245	mg/L	0.0012	98	70	130			
Cobalt		0.488	mg/L	0.0052	98	70	130			
Manganese		2.47	mg/L	0.0012	99	70	130			
Molybdenum		0.505	mg/L	0.0053	101	70	130			
Nickel		0.491	mg/L	0.0050	97	70	130			
Vanadium		0.515	mg/L	0.010	100	70	130			
Lab ID: C15010200-001CMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_150114A				01/14/15 15:24
Aluminum		2.61	mg/L	0.030	104	70	130	0.6	20	
Beryllium		0.250	mg/L	0.0010	100	70	130	0.0	20	
Cadmium		0.245	mg/L	0.0012	98	70	130	0.1	20	
Cobalt		0.487	mg/L	0.0052	97	70	130	0.2	20	
Manganese		2.47	mg/L	0.0012	99	70	130	0.2	20	
Molybdenum		0.510	mg/L	0.0053	102	70	130	0.9	20	
Nickel		0.489	mg/L	0.0050	96	70	130	0.5	20	
Vanadium		0.517	mg/L	0.010	101	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150114A	
Lab ID: ICV	4	Initial Calibration Verification Standard							01/14/15 12:24	
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Cobalt		0.0498	mg/L	0.0010	100	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Uranium		0.0500	mg/L	0.00030	100	90	110			
Method: E200.8									Batch: 43651	
Lab ID: MB-43651	4	Method Blank				Run: ICPMS2-C_150114A			01/14/15 21:38	
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Uranium		1E-05	mg/L	9E-06						
Lab ID: LCS3-43651	4	Laboratory Control Sample				Run: ICPMS2-C_150114A			01/14/15 21:42	
Cadmium		0.250	mg/L	0.0010	100	85	115			
Cobalt		0.463	mg/L	0.0050	93	85	115			
Lead		0.504	mg/L	0.0010	101	85	115			
Uranium		0.529	mg/L	0.00030	106	85	115			
Lab ID: C15010200-001CMS3	4	Sample Matrix Spike				Run: ICPMS2-C_150114A			01/14/15 21:52	
Cadmium		0.25	mg/L	0.0010	99	70	130			
Cobalt		0.45	mg/L	0.010	89	70	130			
Lead		0.51	mg/L	0.0010	102	70	130			
Uranium		0.55	mg/L	0.00030	108	70	130			
Lab ID: C15010200-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150114A			01/14/15 21:55	
Cadmium		0.25	mg/L	0.0010	98	70	130	0.8	20	
Cobalt		0.44	mg/L	0.010	88	70	130	0.6	20	
Lead		0.51	mg/L	0.0010	101	70	130	0.6	20	
Uranium		0.54	mg/L	0.00030	107	70	130	0.8	20	
Lab ID: C15010192-011CMS3	4	Sample Matrix Spike				Run: ICPMS2-C_150114A			01/14/15 23:11	
Cadmium		0.246	mg/L	0.0010	99	70	130			
Cobalt		0.473	mg/L	0.0050	95	70	130			
Lead		0.510	mg/L	0.0010	102	70	130			
Uranium		0.535	mg/L	0.00030	107	70	130			
Lab ID: C15010192-011CMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150114A			01/14/15 23:14	
Cadmium		0.246	mg/L	0.0010	98	70	130	0.1	20	
Cobalt		0.471	mg/L	0.0050	94	70	130	0.3	20	
Lead		0.508	mg/L	0.0010	101	70	130	0.6	20	
Uranium		0.533	mg/L	0.00030	107	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150112A	
Lab ID: ICV	Initial Calibration Verification Standard								01/12/15 16:51	
Sulfate		40.2	mg/L	1.0	101	90	110			
Lab ID: CCV-011214-1	Continuing Calibration Verification Standard								01/12/15 17:43	
Sulfate		39.7	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R195083	
Lab ID: ICB	Method Blank					Run: IC1-C_150112A			01/12/15 17:09	
Sulfate		0.2	mg/L	0.1						
Lab ID: LFB-011214-1	Laboratory Fortified Blank					Run: IC1-C_150112A			01/12/15 17:26	
Sulfate		39.8	mg/L	1.0	99	90	110			
Lab ID: C15010200-001AMS	Sample Matrix Spike					Run: IC1-C_150112A			01/12/15 20:38	
Sulfate		67.6	mg/L	1.0	103	90	110			
Lab ID: C15010200-001AMSD	Sample Matrix Spike Duplicate					Run: IC1-C_150112A			01/12/15 20:55	
Sulfate		68.2	mg/L	1.0	104	90	110	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E300.0**									Analytical Run: IC2-C_150109A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							01/09/15 12:41	
Chloride			10.4	mg/L	1.0	104	90	110			
Sulfate			41.0	mg/L	1.0	103	90	110			
Lab ID:	**CCV-010914-2**	2	Continuing Calibration Verification Standard							01/09/15 16:48	
Chloride			10.6	mg/L	1.0	106	90	110			
Sulfate			41.9	mg/L	1.0	105	90	110			
Lab ID:	**CCV-010914-3**	2	Continuing Calibration Verification Standard							01/09/15 20:55	
Chloride			10.6	mg/L	1.0	106	90	110			
Sulfate			42.0	mg/L	1.0	105	90	110			
Method:	**E300.0**									Batch: R195032	
Lab ID:	**ICB**	2	Method Blank				Run: IC2-C_150109A			01/09/15 12:57	
Chloride			ND	mg/L	0.01						
Sulfate			0.1	mg/L	0.05						
Lab ID:	**LFB-010914-1**	2	Laboratory Fortified Blank				Run: IC2-C_150109A			01/09/15 13:12	
Chloride			10.3	mg/L	1.0	103	90	110			
Sulfate			40.3	mg/L	1.0	100	90	110			
Lab ID:	**C15010157-001AMS**	2	Sample Matrix Spike				Run: IC2-C_150109A			01/09/15 17:34	
Chloride			22700	mg/L	52	104	90	110			
Sulfate			20600	mg/L	210	102	90	110			
Lab ID:	**C15010157-001AMSD**	2	Sample Matrix Spike Duplicate				Run: IC2-C_150109A			01/09/15 17:50	
Chloride			22800	mg/L	52	105	90	110	0.1	20	
Sulfate			20700	mg/L	210	103	90	110	0.7	20	
Lab ID:	**C15010066-001BMS**	2	Sample Matrix Spike				Run: IC2-C_150109A			01/09/15 18:36	
Chloride			345	mg/L	1.0	99	90	110			
Sulfate			409	mg/L	4.2	102	90	110			
Lab ID:	**C15010066-001BMSD**	2	Sample Matrix Spike Duplicate				Run: IC2-C_150109A			01/09/15 18:51	
Chloride			347	mg/L	1.0	101	90	110	0.6	20	
Sulfate			417	mg/L	4.2	104	90	110	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E353.2**									Analytical Run: TECHNICON_150112A	
Lab ID: **CCV-12**		Continuing Calibration Verification Standard							01/12/15 12:24	
Nitrogen, Nitrate+Nitrite as N		1.01	mg/L	0.10	101	90	110			
Lab ID: **CCV-26**		Continuing Calibration Verification Standard							01/12/15 12:59	
Nitrogen, Nitrate+Nitrite as N		1.02	mg/L	0.10	102	90	110			
Method: **E353.2**									Batch: R195061	
Lab ID: **MBLK-1**		Method Blank				Run: TECHNICON_150112A			01/12/15 11:56	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: **LFB-3**		Laboratory Fortified Blank				Run: TECHNICON_150112A			01/12/15 12:01	
Nitrogen, Nitrate+Nitrite as N		2.08	mg/L	0.10	106	90	110			
Lab ID: **C15010192-003DMS**		Sample Matrix Spike				Run: TECHNICON_150112A			01/12/15 13:06	
Nitrogen, Nitrate+Nitrite as N		163	mg/L	5.0	105	90	110			
Lab ID: **C15010192-003DMSD**		Sample Matrix Spike Duplicate				Run: TECHNICON_150112A			01/12/15 13:09	
Nitrogen, Nitrate+Nitrite as N		164	mg/L	5.0	106	90	110	0.6	10	
Lab ID: **C15010193-002DMS**		Sample Matrix Spike				Run: TECHNICON_150112A			01/12/15 13:41	
Nitrogen, Nitrate+Nitrite as N		88.2	mg/L	2.5	105	90	110			
Lab ID: **C15010193-002DMSD**		Sample Matrix Spike Duplicate				Run: TECHNICON_150112A			01/12/15 13:44	
Nitrogen, Nitrate+Nitrite as N		89.7	mg/L	2.5	108	90	110	1.7	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R195133	
Lab ID: 011315_CCV_20	9	Continuing Calibration Verification Standard							01/13/15 22:54	
Bromodichloromethane		11.0	ug/L	1.0	110	70	130			
Bromoform		10.2	ug/L	1.0	102	70	130			
Chlorodibromomethane		10.2	ug/L	1.0	102	70	130			
Chloroform		12.0	ug/L	1.0	120	70	130			
Trihalomethanes, Total		43.4	ug/L	1.0	108	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	103	70	130			
Surr: Dibromofluoromethane				1.0	110	70	130			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	110	70	130			
Method: E624									Batch: R195133	
Lab ID: 011315_LCS_4	9	Laboratory Control Sample				Run: SATURNCA_150113C			01/13/15 13:29	
Bromodichloromethane		9.80	ug/L	1.0	98	60	130			
Bromoform		9.20	ug/L	1.0	92	60	142			
Chlorodibromomethane		9.40	ug/L	1.0	94	67	134			
Chloroform		9.96	ug/L	1.0	100	56	135			
Trihalomethanes, Total		38.4	ug/L	1.0	96	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	100	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	109	70	130			
Lab ID: 011315_MBLK_6	9	Method Blank				Run: SATURNCA_150113C			01/13/15 14:39	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	105	73.7	126			
Surr: Dibromofluoromethane				1.0	108	64.4	131			
Surr: p-Bromofluorobenzene				1.0	107	67.1	133			
Surr: Toluene-d8				1.0	110	79.7	125			
Lab ID: C15010192-002HMS	9	Sample Matrix Spike				Run: SATURNCA_150113C			01/14/15 07:06	
Bromodichloromethane		108	ug/L	5.0	108	60	130			
Bromoform		101	ug/L	5.0	101	60	142			
Chlorodibromomethane		96.0	ug/L	5.0	96	67	134			
Chloroform		436	ug/L	5.0	133	56	135			
Trihalomethanes, Total		741	ug/L	5.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	107	70	130			
Surr: Dibromofluoromethane				1.0	109	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195133
Lab ID: C15010192-002HMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_150113C				01/14/15 07:41
Bromodichloromethane		117	ug/L	5.0	117	60	130	7.8	20	
Bromoform		102	ug/L	5.0	102	60	142	0.8	20	
Chlorodibromomethane		99.6	ug/L	5.0	100	67	134	3.7	20	
Chloroform		436	ug/L	5.0	133	56	135	0.0	20	
Trihalomethanes, Total		754	ug/L	5.0	113	70	130	1.8	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	108	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	110	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R195180	
Lab ID: 14-Jan-15_CCV_13	9	Continuing Calibration Verification Standard							01/14/15 16:12	
Bromodichloromethane		11.6	ug/L	1.0	116	70	130			
Bromoform		11.1	ug/L	1.0	111	70	130			
Chlorodibromomethane		11.4	ug/L	1.0	114	70	130			
Chloroform		10.7	ug/L	1.0	107	70	130			
Trihalomethanes, Total		44.8	ug/L	1.0	112	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	103	70	130			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	101	70	130			
Method: E624									Batch: R195180	
Lab ID: 14-Jan-15_LCS_14	9	Laboratory Control Sample				Run: 5975VOC1_150114C			01/14/15 16:47	
Bromodichloromethane		11.6	ug/L	1.0	116	60	130			
Bromoform		11.0	ug/L	1.0	110	60	142			
Chlorodibromomethane		11.6	ug/L	1.0	116	67	134			
Chloroform		10.2	ug/L	1.0	102	56	135			
Trihalomethanes, Total		44.5	ug/L	1.0	111	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	70	130			
Surr: Dibromofluoromethane				1.0	97	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	100	70	130			
Lab ID: 14-Jan-15_MBLK_16	9	Method Blank				Run: 5975VOC1_150114C			01/14/15 17:57	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	124	73.7	126			
Surr: Dibromofluoromethane				1.0	117	64.4	131			
Surr: p-Bromofluorobenzene				1.0	117	67.1	133			
Surr: Toluene-d8				1.0	98	79.7	125			
Lab ID: C15010192-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150114C			01/15/15 02:06	
Bromodichloromethane		120	ug/L	5.0	120	60	130			
Bromoform		110	ug/L	5.0	110	60	142			
Chlorodibromomethane		112	ug/L	5.0	112	67	134			
Chloroform		229	ug/L	5.0	120	56	135			
Trihalomethanes, Total		571	ug/L	5.0	116	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	111	70	130			
Surr: Dibromofluoromethane				1.0	117	43	142			
Surr: p-Bromofluorobenzene				1.0	113	70	130			
Surr: Toluene-d8				1.0	104	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195180
Lab ID: C15010192-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150114C				01/15/15 02:41
Bromodichloromethane		114	ug/L	5.0	114	60	130	5.5	20	
Bromoform		109	ug/L	5.0	109	60	142	0.7	20	
Chlorodibromomethane		110	ug/L	5.0	110	67	134	2.2	20	
Chloroform		223	ug/L	5.0	114	56	135	2.5	20	
Trihalomethanes, Total		556	ug/L	5.0	112	70	130	2.7	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	111	70	130			
Surr: Dibromofluoromethane				1.0	116	43	142			
Surr: p-Bromofluorobenzene				1.0	114	70	130			
Surr: Toluene-d8				1.0	103	70	130			

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E900.1**										Batch: GA-0844
Lab ID: **MB-GA-0844**	3	Method Blank				Run: BERTHOLD 770-2_150115A			01/19/15 13:12	
Gross Alpha minus Rn & U		-0.3	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.2	pCi/L							
Gross Alpha minus Rn & U MDC		0.6	pCi/L							
Lab ID: **LCS-GA-0844**		Laboratory Control Sample				Run: BERTHOLD 770-2_150115A			01/19/15 13:12	
Gross Alpha minus Rn & U		46.6	pCi/L		124	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: **C15010192-009GMS**		Sample Matrix Spike				Run: BERTHOLD 770-2_150115A			01/19/15 15:21	
Gross Alpha minus Rn & U		72.9	pCi/L		96	70	130			
Lab ID: **C15010192-009GMSD**		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_150115A			01/19/15 15:21	
Gross Alpha minus Rn & U		80.6	pCi/L		106	70	130	9.9	49.5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7522
Lab ID: LCS-RA226-7522		Laboratory Control Sample				Run: G542M_150112A				01/26/15 09:49
Radium 226		12	pCi/L		104	80	120			
Lab ID: MB-RA226-7522	3	Method Blank				Run: G542M_150112A				01/26/15 09:49
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: C15010192-001GMS		Sample Matrix Spike				Run: G542M_150112A				01/26/15 09:49
Radium 226		24	pCi/L		101	70	130			
Lab ID: C15010192-001GMSD		Sample Matrix Spike Duplicate				Run: G542M_150112A				01/26/15 09:49
Radium 226		23	pCi/L		99	70	130	1.3	48.9	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2172	
Lab ID: LCS-RA-TH-ISO-2172		Laboratory Control Sample				Run: ALPHANALYST_150113A			01/19/15 09:45	
Thorium 230		6.9	pCi/L		103	80	120			
Lab ID: C15010192-005GMS		Sample Matrix Spike				Run: ALPHANALYST_150113A			01/19/15 09:46	
Thorium 230		14.0	pCi/L		104	70	130			
Lab ID: C15010192-005GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150113A			01/19/15 09:46	
Thorium 230		14.1	pCi/L		105	70	130	0.6	48	
Lab ID: MB-RA-TH-ISO-2172	3	Method Blank				Run: ALPHANALYST_150113A			01/19/15 15:55	
Thorium 230		0.08	pCi/L							U
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-1 **Work Order:** C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E909.0**										Batch: T_PB-210-0519
Lab ID: **MB-PB-210-0519**	3	Method Blank				Run: SUB-T60929				01/22/15 12:59
Lead 210		-0.3	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: **LCS-PB-210-0519**		Laboratory Control Sample				Run: SUB-T60929				01/22/15 14:08
Lead 210		23	pCi/L		103	80	120			
Lab ID: **T15010038-001FMS**		Sample Matrix Spike				Run: SUB-T60929				01/22/15 16:27
Lead 210		36	pCi/L		90	70	130			
Lab ID: **T15010038-001FMSD**		Sample Matrix Spike Duplicate				Run: SUB-T60929				01/22/15 17:36
Lead 210		42	pCi/L		107	70	130	17	43.7	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-1
Work Order: C15010192

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4857
Lab ID: LCS-228-RA226-7522		Laboratory Control Sample				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		7.3	pCi/L		97	80	120			
Lab ID: MB-RA226-7522	3	Method Blank				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		1.0	pCi/L							
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15010192-002GMS		Sample Matrix Spike				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		15	pCi/L		83	70	130			
Lab ID: C15010192-002GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150112B				01/21/15 10:03
Radium 228		16	pCi/L		91	70	130	6.7	50.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

ANALYTICAL SUMMARY REPORT

February 27, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15010404 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 13 samples for United Nuclear Corporation on 1/16/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010404-001	613	01/12/15 9:30	01/16/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15010404-002	517	01/12/15 10:15	01/16/15	Aqueous	Same As Above
C15010404-003	708	01/12/15 11:35	01/16/15	Aqueous	Same As Above
C15010404-004	711	01/12/15 12:55	01/16/15	Aqueous	Same As Above
C15010404-005	EPA-13	01/12/15 13:36	01/16/15	Aqueous	Same As Above
C15010404-006	719	01/12/15 14:28	01/16/15	Aqueous	Same As Above
C15010404-007	420	01/12/15 15:47	01/16/15	Aqueous	Same As Above
C15010404-008	EPA-14	01/12/15 16:40	01/16/15	Aqueous	Same As Above
C15010404-009	717	01/13/15 8:50	01/16/15	Aqueous	Same As Above
C15010404-010	717 Duplicate	01/13/15 9:25	01/16/15	Aqueous	Same As Above
C15010404-011	MW-7	01/13/15 10:30	01/16/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C15010404-012	Rinsate	01/13/15 15:25 01/16/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved E624 Purgeable Organics
C15010404-013	Field Blank	01/13/15 16:00 01/16/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2015.02.27 14:29:33 -07:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Sample Delivery Group: C15010404

Report Date: 02/27/15

CASE NARRATIVE

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

TH230 ANALYSIS
USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R195300
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150119B			01/19/15 12:47	
Alkalinity, Total as CaCO3		1.0	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Lab ID: LCS_141001		Laboratory Control Sample				Run: MANTECH_150119B			01/19/15 13:03	
Alkalinity, Total as CaCO3		255	mg/L	5.0	102	90	110			
Lab ID: C15010399-001ADUP	2	Sample Duplicate				Run: MANTECH_150119B			01/19/15 13:18	
Alkalinity, Total as CaCO3		176	mg/L	5.0				0.2	10	
Bicarbonate as HCO3		215	mg/L	5.0				0.2	10	
Lab ID: C15010399-002AMS		Sample Matrix Spike				Run: MANTECH_150119B			01/19/15 13:36	
Alkalinity, Total as CaCO3		443	mg/L	5.0	93	80	120			
Lab ID: C15010400-003ADUP	2	Sample Duplicate				Run: MANTECH_150119B			01/19/15 17:00	
Alkalinity, Total as CaCO3		1090	mg/L	5.0				0.2	10	
Bicarbonate as HCO3		1330	mg/L	5.0				0.2	10	
Lab ID: C15010402-001AMS		Sample Matrix Spike				Run: MANTECH_150119B			01/19/15 17:18	
Alkalinity, Total as CaCO3		368	mg/L	5.0	100	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS150119A	
Lab ID: MB-1_150119A		Method Blank				Run: BAL-18_150119B			01/19/15 08:41	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_150119A		Laboratory Control Sample				Run: BAL-18_150119B			01/19/15 08:42	
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	11	100	90	110			
Lab ID: C15010403-002A MS		Sample Matrix Spike				Run: BAL-18_150119B			01/19/15 08:43	
Solids, Total Dissolved TDS @ 180 C		8480	mg/L	40	104	90	110			
Lab ID: C15010404-001A DUP		Sample Duplicate				Run: BAL-18_150119B			01/19/15 08:46	
Solids, Total Dissolved TDS @ 180 C		11600	mg/L	100				1.2	5	
Lab ID: C15010404-011A DUP		Sample Duplicate				Run: BAL-18_150119B			01/19/15 08:54	
Solids, Total Dissolved TDS @ 180 C		3930	mg/L	42				0.7	5	
Lab ID: C15010404-012A MS		Sample Matrix Spike				Run: BAL-18_150119B			01/19/15 08:55	
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	11	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150202A	
Lab ID: ICV		Initial Calibration Verification Standard							02/02/15 11:11	
Selenium-IV		0.0242	mg/L	0.0010	97	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							02/02/15 11:30	
Selenium-IV		0.0244	mg/L	0.0010	97	90	110			
Method: A3114 B									Batch: 43819	
Lab ID: MB-43819		Method Blank				Run: CVAA-C202_150202A			02/02/15 12:13	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-43819		Laboratory Control Sample				Run: CVAA-C202_150202A			02/02/15 12:14	
Selenium-IV		0.0239	mg/L	0.0010	96	90	110			
Lab ID: C15010404-005CMS		Sample Matrix Spike				Run: CVAA-C202_150202A			02/02/15 12:31	
Selenium-IV		0.0249	mg/L	0.0010	100	85	115			
Lab ID: C15010404-005CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150202A			02/02/15 12:33	
Selenium-IV		0.0245	mg/L	0.0010	98	85	115	1.7	10	
Lab ID: C15010404-012CMS		Sample Matrix Spike				Run: CVAA-C202_150202A			02/02/15 12:49	
Selenium-IV		0.0260	mg/L	0.0010	104	85	115			
Lab ID: C15010404-012CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150202A			02/02/15 12:51	
Selenium-IV		0.0261	mg/L	0.0010	104	85	115	0.2	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150119A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								01/19/15 08:22	
pH		6.9	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								01/19/15 10:16	
pH		7.00	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R195255	
Lab ID: **C15010404-004ADUP**	Sample Duplicate					Run: PHSC_101-C_150119A			01/19/15 12:35	
pH		3.14	s.u.	0.010				0.3	3	
Lab ID: **C15010404-011ADUP**	Sample Duplicate					Run: PHSC_101-C_150119A			01/19/15 13:00	
pH		6.79	s.u.	0.010				0.1	3	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150121A	
Lab ID: CCV-16		Continuing Calibration Verification Standard							01/21/15 12:17	
Nitrogen, Ammonia as N		0.989	mg/L	0.050	99	90	110			
Lab ID: CCV-31		Continuing Calibration Verification Standard							01/21/15 12:42	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Lab ID: CCV-46		Continuing Calibration Verification Standard							01/21/15 13:07	
Nitrogen, Ammonia as N		0.991	mg/L	0.050	99	90	110			
Method: A4500-NH3 G									Batch: R195376	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150121A			01/21/15 11:52	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150121A			01/21/15 11:55	
Nitrogen, Ammonia as N		1.88	mg/L	0.050	96	90	110			
Lab ID: C15010404-005DMS		Sample Matrix Spike				Run: TECHNICON_150121A			01/21/15 12:22	
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	90	110			
Lab ID: C15010404-005DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150121A			01/21/15 12:24	
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	90	110	0.5	10	
Lab ID: C15010404-011DMS		Sample Matrix Spike				Run: TECHNICON_150121A			01/21/15 13:12	
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Lab ID: C15010404-011DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150121A			01/21/15 13:14	
Nitrogen, Ammonia as N		1.98	mg/L	0.050	101	90	110	3.6	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H103637	
Lab ID: **AS-ICV 25ppb-1/23/20**	Initial Calibration Verification Standard								01/23/15 12:04	
Arsenic-III		27.1	ug/L	5.0	108	87.6	114			
Lab ID: **AS-50.0-1/23/2015**	Continuing Calibration Verification Standard								01/23/15 12:16	
Arsenic-III		48.6	ug/L	5.0	97	85	115			
Method: **E1632AM**									Batch: H_R103637	
Lab ID: **AS-LFB 50ppb-1/23/2**	Laboratory Fortified Blank					Run: SUB-H103637			01/23/15 12:40	
Arsenic-III		48.7	ug/L	5.0	97	55	146			
Lab ID: **ICB**	Method Blank					Run: SUB-H103637			01/23/15 12:52	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **H15010262-001A MS**	Sample Matrix Spike					Run: SUB-H103637			01/23/15 13:16	
Arsenic-III		50.1	ug/L	5.0	100	55	146			
Lab ID: **H15010262-001A MSD**	Sample Matrix Spike Duplicate					Run: SUB-H103637			01/23/15 13:28	
Arsenic-III		51.6	ug/L	5.0	103	55	146	3.0	20	
Method: **E1632AM**									Analytical Run: SUB-H103688	
Lab ID: **AS-ICV 25ppb-1/26/20**	Initial Calibration Verification Standard								01/26/15 14:18	
Arsenic-III		26.7	ug/L	5.0	107	87.6	114			
Lab ID: **AS-50.0-1/26/2015**	Continuing Calibration Verification Standard								01/26/15 14:30	
Arsenic-III		50.0	ug/L	5.0	100	85	115			
Method: **E1632AM**									Batch: H_R103688	
Lab ID: **AS-LFB 50ppb-1/26/2**	Laboratory Fortified Blank					Run: SUB-H103688			01/26/15 14:54	
Arsenic-III		48.2	ug/L	5.0	96	55	146			
Lab ID: **ICB**	Method Blank					Run: SUB-H103688			01/26/15 15:06	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15010404-006E**	Sample Matrix Spike					Run: SUB-H103688			01/26/15 15:30	
Arsenic-III		51.2	ug/L	5.0	100	55	146			
Lab ID: **C15010404-006E**	Sample Matrix Spike Duplicate					Run: SUB-H103688			01/26/15 15:42	
Arsenic-III		50.8	ug/L	5.0	99	55	146	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150121A	
Lab ID: ICV	11	Initial Calibration Verification Standard							01/21/15 11:31	
Aluminum		4.87	mg/L	0.10	97	95	105			
Beryllium		0.503	mg/L	0.010	101	95	105			
Cadmium		0.484	mg/L	0.010	97	95	105			
Calcium		50.1	mg/L	1.0	100	95	105			
Cobalt		0.959	mg/L	0.010	96	95	105			
Magnesium		50.3	mg/L	1.0	101	95	105			
Manganese		4.97	mg/L	0.010	99	95	105			
Molybdenum		0.991	mg/L	0.10	99	95	105			
Potassium		49.8	mg/L	1.0	100	95	105			
Sodium		49.8	mg/L	1.0	100	95	105			
Vanadium		1.00	mg/L	0.10	100	95	105			
Lab ID: ICSA	11	Interference Check Sample A							01/21/15 11:46	
Aluminum		456	mg/L	0.10	91	80	120			
Beryllium		ND	mg/L	0.010						
Cadmium		0.00565	mg/L	0.010						
Calcium		461	mg/L	1.0	92	80	120			
Cobalt		-0.00664	mg/L	0.010						
Magnesium		498	mg/L	1.0	100	80	120			
Manganese		-0.0200	mg/L	0.010						
Molybdenum		0.00383	mg/L	0.10						
Potassium		0.00483	mg/L	1.0						
Sodium		0.0951	mg/L	1.0						
Vanadium		-0.00261	mg/L	0.10						
Lab ID: ICSAB	11	Interference Check Sample AB							01/21/15 11:51	
Aluminum		459	mg/L	0.10	92	80	120			
Beryllium		0.468	mg/L	0.010	94	80	120			
Cadmium		0.934	mg/L	0.010	93	80	120			
Calcium		460	mg/L	1.0	92	80	120			
Cobalt		0.423	mg/L	0.010	85	80	120			
Magnesium		495	mg/L	1.0	99	80	120			
Manganese		0.430	mg/L	0.010	86	80	120			
Molybdenum		0.00557	mg/L	0.10						
Potassium		0.00923	mg/L	1.0						
Sodium		0.192	mg/L	1.0						
Vanadium		0.502	mg/L	0.10	100	80	120			
Method: E200.7									Batch: 43705	
Lab ID: MB-43705	7	Method Blank				Run: ICP4-C_150121A			01/21/15 16:14	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Cadmium		ND	mg/L	0.001						
Cobalt		ND	mg/L	0.005						
Manganese		ND	mg/L	0.001						

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 43705
Lab ID: MB-43705	7	Method Blank				Run: ICP4-C_150121A				01/21/15 16:14
Molybdenum		0.005	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-43705	7	Laboratory Control Sample				Run: ICP4-C_150121A				01/21/15 16:18
Aluminum		2.54	mg/L	0.030	102	85	115			
Beryllium		0.252	mg/L	0.0010	101	85	115			
Cadmium		0.249	mg/L	0.0012	100	85	115			
Cobalt		0.494	mg/L	0.0052	99	85	115			
Manganese		2.52	mg/L	0.0012	101	85	115			
Molybdenum		0.507	mg/L	0.0053	100	85	115			
Vanadium		0.511	mg/L	0.010	102	85	115			
Lab ID: C15010404-009CMS3	7	Sample Matrix Spike				Run: ICP4-C_150121A				01/21/15 17:08
Aluminum		180	mg/L	0.075		70	130			A
Beryllium		0.379	mg/L	0.0014	99	70	130			
Cadmium		0.247	mg/L	0.0062	96	70	130			
Cobalt		1.42	mg/L	0.026	94	70	130			
Manganese		21.8	mg/L	0.0058		70	130			A
Molybdenum		0.497	mg/L	0.026	99	70	130			
Vanadium		0.492	mg/L	0.017	98	70	130			
Lab ID: C15010404-009CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150121A				01/21/15 17:12
Aluminum		176	mg/L	0.075		70	130	1.7	20	A
Beryllium		0.378	mg/L	0.0014	99	70	130	0.4	20	
Cadmium		0.248	mg/L	0.0062	96	70	130	0.3	20	
Cobalt		1.42	mg/L	0.026	94	70	130	0.0	20	
Manganese		21.7	mg/L	0.0058		70	130	0.8	20	A
Molybdenum		0.482	mg/L	0.026	96	70	130	3.0	20	
Vanadium		0.493	mg/L	0.017	99	70	130	0.2	20	
Lab ID: C15010422-005CMS3	7	Sample Matrix Spike				Run: ICP4-C_150121A				01/21/15 18:22
Aluminum		2.57	mg/L	0.030	102	70	130			
Beryllium		0.249	mg/L	0.0010	100	70	130			
Cadmium		0.238	mg/L	0.0012	95	70	130			
Cobalt		0.474	mg/L	0.0052	95	70	130			
Manganese		2.41	mg/L	0.0012	96	70	130			
Molybdenum		0.495	mg/L	0.0053	99	70	130			
Vanadium		0.495	mg/L	0.010	99	70	130			
Lab ID: C15010422-005CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150121A				01/21/15 18:25
Aluminum		2.58	mg/L	0.030	103	70	130	0.6	20	
Beryllium		0.249	mg/L	0.0010	100	70	130	0.1	20	
Cadmium		0.239	mg/L	0.0012	95	70	130	0.1	20	
Cobalt		0.473	mg/L	0.0052	95	70	130	0.4	20	
Manganese		2.41	mg/L	0.0012	97	70	130	0.3	20	
Molybdenum		0.505	mg/L	0.0053	101	70	130	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 43705
Lab ID: C15010422-005CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150121A				01/21/15 18:25
Vanadium		0.494	mg/L	0.010	99	70	130	0.3	20	
Method: E200.7										Batch: R195396
Lab ID: MB-150121A	4	Method Blank				Run: ICP4-C_150121A				01/21/15 12:10
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.04						
Potassium		ND	mg/L	0.06						
Sodium		0.04	mg/L	0.01						
Lab ID: LFB-150121A	4	Laboratory Fortified Blank				Run: ICP4-C_150121A				01/21/15 12:14
Calcium		47.2	mg/L	1.0	94	85	115			
Magnesium		46.5	mg/L	1.0	93	85	115			
Potassium		49.4	mg/L	1.0	99	85	115			
Sodium		48.0	mg/L	1.0	96	85	115			
Lab ID: C15010471-001CMS2	4	Sample Matrix Spike				Run: ICP4-C_150121A				01/21/15 16:06
Calcium		105	mg/L	1.0	96	70	130			
Magnesium		100	mg/L	1.0	95	70	130			
Potassium		101	mg/L	1.0	96	70	130			
Sodium		216	mg/L	1.0	92	70	130			
Lab ID: C15010471-001CMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150121A				01/21/15 16:10
Calcium		105	mg/L	1.0	96	70	130	0.2	20	
Magnesium		100	mg/L	1.0	95	70	130	0.1	20	
Potassium		101	mg/L	1.0	96	70	130	0.1	20	
Sodium		217	mg/L	1.0	93	70	130	0.4	20	
Lab ID: C15010404-009BMS2	4	Sample Matrix Spike				Run: ICP4-C_150121A				01/21/15 19:19
Calcium		688	mg/L	1.0	88	70	130			
Magnesium		734	mg/L	1.0	93	70	130			
Potassium		242	mg/L	1.0	91	70	130			
Sodium		403	mg/L	1.2	91	70	130			
Lab ID: C15010404-009BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150121A				01/21/15 19:23
Calcium		696	mg/L	1.0	91	70	130	1.1	20	
Magnesium		744	mg/L	1.0	96	70	130	1.3	20	
Potassium		249	mg/L	1.0	94	70	130	2.9	20	
Sodium		411	mg/L	1.2	94	70	130	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150126A	
Lab ID: ICV	3	Initial Calibration Verification Standard							01/26/15 12:29	
Magnesium		50.3	mg/L	1.0	101	95	105			
Potassium		49.7	mg/L	1.0	99	95	105			
Sodium		50.1	mg/L	1.0	100	95	105			
Lab ID: ICSA	3	Interference Check Sample A							01/26/15 12:44	
Magnesium		500	mg/L	1.0	100	80	120			
Potassium		0.00905	mg/L	1.0						
Sodium		0.115	mg/L	1.0						
Lab ID: ICSAB	3	Interference Check Sample AB							01/26/15 12:49	
Magnesium		501	mg/L	1.0	100	80	120			
Potassium		0.0122	mg/L	1.0						
Sodium		0.0493	mg/L	1.0						
Method: E200.7									Batch: R195538	
Lab ID: MB-150126A	3	Method Blank				Run: ICP4-C_150126A			01/26/15 13:08	
Magnesium		ND	mg/L	0.04						
Potassium		ND	mg/L	0.06						
Sodium		0.03	mg/L	0.01						
Lab ID: LFB-150126A	3	Laboratory Fortified Blank				Run: ICP4-C_150126A			01/26/15 13:12	
Magnesium		46.9	mg/L	1.0	94	85	115			
Potassium		52.9	mg/L	1.0	106	85	115			
Sodium		50.0	mg/L	1.0	100	85	115			
Lab ID: C15010595-010BMS2	3	Sample Matrix Spike				Run: ICP4-C_150126A			01/26/15 19:33	
Magnesium		96.1	mg/L	1.0	94	70	130			
Potassium		95.9	mg/L	1.0	94	70	130			
Sodium		96.8	mg/L	1.0	95	70	130			
Lab ID: C15010595-010BMSD	3	Sample Matrix Spike Duplicate				Run: ICP4-C_150126A			01/26/15 19:36	
Magnesium		96.3	mg/L	1.0	94	70	130	0.2	20	
Potassium		97.4	mg/L	1.0	95	70	130	1.5	20	
Sodium		97.3	mg/L	1.0	95	70	130	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150128A	
Lab ID: ICV		Initial Calibration Verification Standard							01/28/15 12:39	
Calcium		50.0	mg/L	1.0	100	95	105			
Lab ID: ICSA		Interference Check Sample A							01/28/15 12:54	
Calcium		459	mg/L	1.0	92	80	120			
Lab ID: ICSAB		Interference Check Sample AB							01/28/15 12:58	
Calcium		462	mg/L	1.0	92	80	120			
Method: E200.7									Batch: R195636	
Lab ID: MB-150128A		Method Blank				Run: ICP4-C_150128A			01/28/15 13:18	
Calcium		ND	mg/L	0.01						
Lab ID: LFB-150128A		Laboratory Fortified Blank				Run: ICP4-C_150128A			01/28/15 13:22	
Calcium		47.6	mg/L	1.0	95	85	115			
Lab ID: C15010647-003BMS2		Sample Matrix Spike				Run: ICP4-C_150128A			01/28/15 17:15	
Calcium		230	mg/L	1.0	89	70	130			
Lab ID: C15010647-003BMSD		Sample Matrix Spike Duplicate				Run: ICP4-C_150128A			01/28/15 17:19	
Calcium		233	mg/L	1.0	91	70	130	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150121A	
Lab ID: ICV	6	Initial Calibration Verification Standard							01/21/15 12:14	
Beryllium		0.0504	mg/L	0.0010	101	90	110			
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0511	mg/L	0.0010	102	90	110			
Lead		0.0508	mg/L	0.0010	102	90	110			
Nickel		0.0498	mg/L	0.0010	100	90	110			
Uranium		0.0502	mg/L	0.00030	100	90	110			
Method: E200.8									Batch: 43705	
Lab ID: C15010404-009CMS3	6	Sample Matrix Spike				Run: ICPMS2-C_150121A			01/21/15 16:31	
Beryllium		0.321	mg/L	0.0010	83	70	130			
Cadmium		0.266	mg/L	0.0010	98	70	130			
Cobalt		1.43	mg/L	0.0050	95	70	130			
Lead		0.552	mg/L	0.0010	104	70	130			
Nickel		1.42	mg/L	0.0050	95	70	130			
Uranium		0.672	mg/L	0.00030	109	70	130			
Lab ID: C15010404-009CMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150121A			01/21/15 16:34	
Beryllium		0.323	mg/L	0.0010	84	70	130	0.4	20	
Cadmium		0.267	mg/L	0.0010	98	70	130	0.3	20	
Cobalt		1.44	mg/L	0.0050	96	70	130	0.3	20	
Lead		0.554	mg/L	0.0010	105	70	130	0.5	20	
Nickel		1.39	mg/L	0.0050	89	70	130	2.0	20	
Uranium		0.674	mg/L	0.00030	109	70	130	0.2	20	
Lab ID: C15010422-005CMS3	6	Sample Matrix Spike				Run: ICPMS2-C_150121A			01/21/15 17:16	
Beryllium		0.226	mg/L	0.0010	90	70	130			
Cadmium		0.246	mg/L	0.0010	98	70	130			
Cobalt		0.450	mg/L	0.0050	90	70	130			
Lead		0.528	mg/L	0.0010	105	70	130			
Nickel		0.463	mg/L	0.0050	92	70	130			
Uranium		0.622	mg/L	0.00030	112	70	130			
Lab ID: C15010422-005CMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150121A			01/21/15 17:18	
Beryllium		0.221	mg/L	0.0010	89	70	130	1.8	20	
Cadmium		0.246	mg/L	0.0010	98	70	130	0.2	20	
Cobalt		0.441	mg/L	0.0050	88	70	130	2.0	20	
Lead		0.529	mg/L	0.0010	106	70	130	0.1	20	
Nickel		0.458	mg/L	0.0050	91	70	130	1.1	20	
Uranium		0.631	mg/L	0.00030	114	70	130	1.5	20	
Lab ID: MB-43705	6	Method Blank				Run: ICPMS2-C_150121A			01/21/15 15:20	
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 43705
Lab ID: MB-43705	6	Method Blank				Run: ICPMS2-C_150121A				01/21/15 15:20
Uranium		1.0E-05	mg/L	9E-06						
Lab ID: LCS3-43705	6	Laboratory Control Sample				Run: ICPMS2-C_150121A				01/21/15 15:24
Beryllium		0.235	mg/L	0.0010	94	85	115			
Cadmium		0.252	mg/L	0.0010	101	85	115			
Cobalt		0.491	mg/L	0.0050	98	85	115			
Lead		0.527	mg/L	0.0010	105	85	115			
Nickel		0.483	mg/L	0.0050	97	85	115			
Uranium		0.547	mg/L	0.00030	109	85	115			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E300.0**									Analytical Run: IC1-C_150119A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							01/19/15 12:48	
Chloride			9.87	mg/L	1.0	99	90	110			
Sulfate			39.4	mg/L	1.0	98	90	110			
Lab ID:	**CCV-011915-4**	2	Continuing Calibration Verification Standard							01/20/15 02:47	
Chloride			9.81	mg/L	1.0	98	90	110			
Sulfate			39.4	mg/L	1.0	99	90	110			
Lab ID:	**CCV-011915-5**	2	Continuing Calibration Verification Standard							01/20/15 10:59	
Chloride			9.83	mg/L	1.0	98	90	110			
Sulfate			39.6	mg/L	1.0	99	90	110			
Method:	**E300.0**									Batch: R195341	
Lab ID:	**ICB**	2	Method Blank				Run: IC1-C_150119A			01/19/15 13:05	
Chloride			ND	mg/L	0.04						
Sulfate			0.1	mg/L	0.1						
Lab ID:	**LFB-011915-1**	2	Laboratory Fortified Blank				Run: IC1-C_150119A			01/19/15 14:35	
Chloride			9.78	mg/L	1.0	98	90	110			
Sulfate			38.9	mg/L	1.0	97	90	110			
Lab ID:	**C15010403-006AMS**	2	Sample Matrix Spike				Run: IC1-C_150119A			01/20/15 07:47	
Chloride			222	mg/L	2.1	100	90	110			
Sulfate			3760	mg/L	8.3	104	90	110			
Lab ID:	**C15010403-006AMSD**	2	Sample Matrix Spike Duplicate				Run: IC1-C_150119A			01/20/15 08:05	
Chloride			223	mg/L	2.1	100	90	110	0.6	20	
Sulfate			3790	mg/L	8.3	108	90	110	0.8	20	
Lab ID:	**C15010404-006AMS**	2	Sample Matrix Spike				Run: IC1-C_150119A			01/20/15 11:51	
Chloride			232	mg/L	2.1	101	90	110			
Sulfate			4970	mg/L	8.3		90	110			A
Lab ID:	**C15010404-006AMSD**	2	Sample Matrix Spike Duplicate				Run: IC1-C_150119A			01/20/15 12:09	
Chloride			235	mg/L	2.1	102	90	110	1.3	20	
Sulfate			4950	mg/L	8.3		90	110	0.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E300.0**									Analytical Run: IC2-C_150122A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							01/22/15 13:58	
Chloride			9.87	mg/L	1.0	99	90	110			
Sulfate			39.3	mg/L	1.0	98	90	110			
Lab ID:	**CCV-012214-1**	2	Continuing Calibration Verification Standard							01/22/15 14:53	
Chloride			9.77	mg/L	1.0	98	90	110			
Sulfate			39.2	mg/L	1.0	98	90	110			
Method:	**E300.0**									Batch: R195440	
Lab ID:	**ICB**	2	Method Blank				Run: IC2-C_150122A			01/22/15 14:16	
Chloride			0.01	mg/L	0.01						
Sulfate			0.2	mg/L	0.03						
Lab ID:	**LFB-012214-1**	2	Laboratory Fortified Blank				Run: IC2-C_150122A			01/22/15 14:35	
Chloride			9.98	mg/L	1.0	100	90	110			
Sulfate			39.8	mg/L	1.0	99	90	110			
Lab ID:	**C15010365-004BMS**	2	Sample Matrix Spike				Run: IC2-C_150122A			01/22/15 16:43	
Chloride			26.4	mg/L	1.0	103	90	110			
Sulfate			344	mg/L	1.0	94	90	110			
Lab ID:	**C15010365-004BMSD**	2	Sample Matrix Spike Duplicate				Run: IC2-C_150122A			01/22/15 17:01	
Chloride			26.7	mg/L	1.0	105	90	110	1.3	20	
Sulfate			344	mg/L	1.0	94	90	110	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E300.0**									Analytical Run: IC2-C_150126A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							01/26/15 12:30	
Chloride			10.0	mg/L	1.0	100	90	110			
Sulfate			39.8	mg/L	1.0	100	90	110			
Lab ID:	**CCV-012615-8**	2	Continuing Calibration Verification Standard							01/27/15 19:39	
Chloride			9.91	mg/L	1.0	99	90	110			
Sulfate			39.7	mg/L	1.0	99	90	110			
Method:	**E300.0**									Batch: R195580	
Lab ID:	**ICB**	2	Method Blank				Run: IC2-C_150126A			01/26/15 12:49	
Chloride			0.02	mg/L	0.01						
Sulfate			0.2	mg/L	0.03						
Lab ID:	**LFB-012615-1**	2	Laboratory Fortified Blank				Run: IC2-C_150126A			01/26/15 13:07	
Chloride			10.1	mg/L	1.0	101	90	110			
Sulfate			40.5	mg/L	1.0	101	90	110			
Lab ID:	**C15010399-007AMS**	2	Sample Matrix Spike				Run: IC2-C_150126A			01/27/15 21:11	
Chloride			53.4	mg/L	1.0	102	90	110			
Sulfate			668	mg/L	2.1	96	90	110			
Lab ID:	**C15010399-007AMSD**	2	Sample Matrix Spike Duplicate				Run: IC2-C_150126A			01/27/15 21:30	
Chloride			53.2	mg/L	1.0	102	90	110	0.2	20	
Sulfate			675	mg/L	2.1	99	90	110	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150116A	
Lab ID: CCV-33	Continuing Calibration Verification Standard								01/16/15 14:39	
Nitrogen, Nitrate+Nitrite as N		1.07	mg/L	0.10	107	90	110			
Lab ID: CCV-47	Continuing Calibration Verification Standard								01/16/15 15:14	
Nitrogen, Nitrate+Nitrite as N		1.02	mg/L	0.10	102	90	110			
Method: E353.2									Batch: R195266	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150116A			01/16/15 13:19	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-4	Laboratory Fortified Blank					Run: TECHNICON_150116A			01/16/15 13:26	
Nitrogen, Nitrate+Nitrite as N		2.09	mg/L	0.10	107	90	110			
Lab ID: C15010404-010DMS	Sample Matrix Spike					Run: TECHNICON_150116A			01/16/15 15:41	
Nitrogen, Nitrate+Nitrite as N		73.7	mg/L	2.5	101	90	110			
Lab ID: C15010404-010DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150116A			01/16/15 15:44	
Nitrogen, Nitrate+Nitrite as N		73.4	mg/L	2.5	101	90	110	0.4	10	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R195254
Lab ID: 16-Jan-15_CCV_2	9	Continuing Calibration Verification Standard								01/16/15 13:27
Bromodichloromethane		10.4	ug/L	1.0	104	70	130			
Bromoform		10.8	ug/L	1.0	108	70	130			
Chlorodibromomethane		11.2	ug/L	1.0	112	70	130			
Chloroform		9.32	ug/L	1.0	93	70	130			
Trihalomethanes, Total		41.8	ug/L	1.0	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	95	70	130			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	100	70	130			
Lab ID: 16-Jan-15_CCV_20	9	Continuing Calibration Verification Standard								01/16/15 23:57
Bromodichloromethane		9.76	ug/L	1.0	98	70	130			
Bromoform		10.6	ug/L	1.0	106	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		9.28	ug/L	1.0	93	70	130			
Trihalomethanes, Total		40.5	ug/L	1.0	101	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	97	70	130			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	100	70	130			
Method: E624										Batch: R195254
Lab ID: 16-Jan-15_LCS_3	9	Laboratory Control Sample				Run: 5975VOC1_150116C				01/16/15 14:02
Bromodichloromethane		9.40	ug/L	1.0	94	60	130			
Bromoform		10.0	ug/L	1.0	100	60	142			
Chlorodibromomethane		10.3	ug/L	1.0	103	67	134			
Chloroform		8.40	ug/L	1.0	84	56	135			
Trihalomethanes, Total		38.2	ug/L	1.0	95	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	70	130			
Surr: Dibromofluoromethane				1.0	92	43	142			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	98	70	130			
Lab ID: 16-Jan-15_MBLK_5	9	Method Blank				Run: 5975VOC1_150116C				01/16/15 15:12
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	114	73.7	126			
Surr: Dibromofluoromethane				1.0	91	64.4	131			
Surr: p-Bromofluorobenzene				1.0	123	67.1	133			
Surr: Toluene-d8				1.0	99	79.7	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195254
Lab ID: C15010404-008HMS	9	Sample Matrix Spike				Run: 5975VOC1_150116C				01/16/15 22:12
Bromodichloromethane		101	ug/L	5.0	101	60	130			
Bromoform		106	ug/L	5.0	106	60	142			
Chlorodibromomethane		111	ug/L	5.0	111	67	134			
Chloroform		92.8	ug/L	5.0	93	56	135			
Trihalomethanes, Total		411	ug/L	5.0	103	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	110	70	130			
Surr: Dibromofluoromethane				1.0	98	43	142			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	98	70	130			
Lab ID: C15010404-008HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150116C				01/16/15 22:47
Bromodichloromethane		102	ug/L	5.0	102	60	130	1.2	20	
Bromoform		99.2	ug/L	5.0	99	60	142	7.0	20	
Chlorodibromomethane		106	ug/L	5.0	106	67	134	4.8	20	
Chloroform		102	ug/L	5.0	102	56	135	9.8	20	
Trihalomethanes, Total		410	ug/L	5.0	102	70	130	0.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	107	70	130			
Surr: Dibromofluoromethane				1.0	112	43	142			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R195360	
Lab ID: 20-Jan-15_CCV_3	9	Continuing Calibration Verification Standard							01/20/15 11:26	
Bromodichloromethane		10.4	ug/L	1.0	104	70	130			
Bromoform		10.2	ug/L	1.0	102	70	130			
Chlorodibromomethane		10.8	ug/L	1.0	108	70	130			
Chloroform		9.96	ug/L	1.0	100	70	130			
Trihalomethanes, Total		41.3	ug/L	1.0	103	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	111	70	130			
Surr: Dibromofluoromethane				1.0	106	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	102	70	130			
Method: E624									Batch: R195360	
Lab ID: 20-Jan-15_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_150120A			01/20/15 12:01	
Bromodichloromethane		9.76	ug/L	1.0	98	60	130			
Bromoform		10.0	ug/L	1.0	100	60	142			
Chlorodibromomethane		10.5	ug/L	1.0	105	67	134			
Chloroform		8.12	ug/L	1.0	81	56	135			
Trihalomethanes, Total		38.4	ug/L	1.0	96	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	113	70	130			
Surr: Dibromofluoromethane				1.0	90	43	142			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	99	70	130			
Lab ID: 20-Jan-15_MBLK_6	9	Method Blank				Run: 5975VOC1_150120A			01/20/15 13:11	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	112	73.7	126			
Surr: Dibromofluoromethane				1.0	94	64.4	131			
Surr: p-Bromofluorobenzene				1.0	120	67.1	133			
Surr: Toluene-d8				1.0	98	79.7	125			
Lab ID: C15010404-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150120A			01/20/15 19:37	
Bromodichloromethane		96.8	ug/L	5.0	97	60	130			
Bromoform		105	ug/L	5.0	105	60	142			
Chlorodibromomethane		104	ug/L	5.0	104	67	134			
Chloroform		173	ug/L	5.0	102	56	135			
Trihalomethanes, Total		479	ug/L	5.0	102	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	109	70	130			
Surr: Dibromofluoromethane				1.0	104	43	142			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R195360
Lab ID: C15010404-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150120A			01/20/15 20:11	
Bromodichloromethane		98.0	ug/L	5.0	98	60	130	1.2	20	
Bromoform		108	ug/L	5.0	108	60	142	2.6	20	
Chlorodibromomethane		106	ug/L	5.0	106	67	134	2.7	20	
Chloroform		175	ug/L	5.0	104	56	135	1.1	20	
Trihalomethanes, Total		488	ug/L	5.0	104	70	130	1.8	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	109	70	130			
Surr: Dibromofluoromethane				1.0	105	43	142			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	101	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0846
Lab ID: MB-GA-0846	3	Method Blank				Run: BERTHOLD 770-1_150122A				01/23/15 11:12
Gross Alpha minus Rn & U		-0.4	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.5	pCi/L							
Gross Alpha minus Rn & U MDC		1	pCi/L							
Lab ID: C15010374-001CMS		Sample Matrix Spike				Run: BERTHOLD 770-1_150122A				01/23/15 11:12
Gross Alpha minus Rn & U		93.6	pCi/L		117	70	130			
Lab ID: C15010374-001CMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_150122A				01/23/15 11:12
Gross Alpha minus Rn & U		90.8	pCi/L		113	70	130	3.0	50.5	
Lab ID: LCS-GA-0846		Laboratory Control Sample				Run: BERTHOLD 770-1_150122A				01/23/15 14:41
Gross Alpha minus Rn & U		48.2	pCi/L		128	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Method: E900.1										Batch: GA-0858
Lab ID: MB-GA-0858	3	Method Blank				Run: BERTHOLD 770-2_150223A				02/23/15 21:58
Gross Alpha minus Rn & U		-0.6	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: LCS-GA-0858		Laboratory Control Sample				Run: BERTHOLD 770-2_150223A				02/23/15 21:58
Gross Alpha minus Rn & U		33.3	pCi/L		90	80	120			
Lab ID: C15020519-015BMS		Sample Matrix Spike				Run: BERTHOLD 770-2_150223A				02/23/15 23:31
Gross Alpha minus Rn & U		83.9	pCi/L		104	70	130			
Lab ID: C15020519-015BMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_150223A				02/23/15 23:31
Gross Alpha minus Rn & U		72.1	pCi/L		88	70	130	15	53.6	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7531
Lab ID: C15010404-006GMS		Sample Matrix Spike				Run: G5000W_150119A				01/27/15 07:23
Radium 226		27	pCi/L		92	70	130			
Lab ID: C15010404-006GMSD		Sample Matrix Spike Duplicate				Run: G5000W_150119A				01/27/15 07:23
Radium 226		26	pCi/L		87	70	130	4.6	48.7	
Lab ID: MB-RA226-7531	3	Method Blank				Run: G5000W_150119A				01/27/15 08:57
Radium 226		0.1	pCi/L							
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Lab ID: LCS-RA226-7531		Laboratory Control Sample				Run: G5000W_150119A				01/27/15 08:57
Radium 226		11	pCi/L		100	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2176
Lab ID: LCS-RA-TH-ISO-2176		Laboratory Control Sample				Run: ALPHANALYST_150120A				01/26/15 13:25
Thorium 230		6.3	pCi/L		95	80	120			
Lab ID: C15010404-006GMS		Sample Matrix Spike				Run: ALPHANALYST_150120A				01/26/15 13:25
Thorium 230		13.6	pCi/L		102	70	130			
Lab ID: C15010404-006GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150120A				01/26/15 13:25
Thorium 230		15.5	pCi/L		116	70	130	13	48	
Lab ID: MB-RA-TH-ISO-2176	3	Method Blank				Run: ALPHANALYST_150120A				01/27/15 09:31
Thorium 230		0.1	pCi/L							
Thorium 230 precision (±)		0.07	pCi/L							
Thorium 230 MDC		0.1	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2181
Lab ID: LCS-RA-TH-ISO-2181		Laboratory Control Sample				Run: ALPHANALYST_150129A				02/02/15 09:59
Thorium 230		5.9	pCi/L		89	80	120			
Lab ID: C15010404-003GDUP	3	Sample Duplicate				Run: ALPHANALYST_150129A				02/02/15 09:59
Thorium 230		0.2	pCi/L					140	201.9	U
Thorium 230 precision (±)		0.4	pCi/L							
Thorium 230 MDC		0.8	pCi/L							
- Duplicate RPD for Th232 is outside of the acceptance range for this analysis. However, the RER of 1.0 is less than the limit of 2.0. This batch is approved.										
Lab ID: C15010405-001EMS		Sample Matrix Spike				Run: ALPHANALYST_150129A				02/02/15 10:00
Thorium 230		6.7	pCi/L		94	70	130			
Lab ID: MB-RA-TH-ISO-2181	3	Method Blank				Run: ALPHANALYST_150129A				02/04/15 09:20
Thorium 230		0.07	pCi/L							U
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.09	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2183
Lab ID: LCS-RA-TH-ISO-2183		Laboratory Control Sample				Run: ALPHANALYST_150202A				02/11/15 09:06
Thorium 230		6.0	pCi/L		90	80	120			
Lab ID: C15010560-007CMS		Sample Matrix Spike				Run: ALPHANALYST_150202A				02/11/15 09:06
Thorium 230		15	pCi/L		113	70	130			
Lab ID: C15010560-007CMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150202A				02/11/15 09:06
Thorium 230		12	pCi/L		92	70	130	21	48	
Lab ID: MB-RA-TH-ISO-2183	3	Method Blank				Run: ALPHANALYST_150202A				02/11/15 09:07
Thorium 230		0.09	pCi/L							U
Thorium 230 precision (±)		0.10	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2185	
Lab ID: LCS-RA-TH-ISO-2185		Laboratory Control Sample				Run: ALPHANALYST_150210A			02/18/15 13:16	
Thorium 230		18.2	pCi/L		95	80	120			
Lab ID: C15010404-003GDUP	3	Sample Duplicate				Run: ALPHANALYST_150210A			02/18/15 13:16	
Thorium 230		0.7	pCi/L					58	164.3	U
Thorium 230 precision (±)		0.5	pCi/L							
Thorium 230 MDC		0.7	pCi/L							
Lab ID: C15010404-009GMS		Sample Matrix Spike				Run: ALPHANALYST_150210A			02/18/15 13:16	
Thorium 230		69.5	pCi/L		109	70	130			
Lab ID: MB-RA-TH-ISO-2185	3	Method Blank				Run: ALPHANALYST_150210A			02/18/15 13:16	
Thorium 230		0.2	pCi/L							U
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E909.0**									Batch: T_PB-210-0522	
Lab ID: **MB-PB-210-0522**	3	Method Blank			Run: SUB-T61200				02/06/15 13:53	
Lead 210		0.1	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: **LCS-PB-210-0522**		Laboratory Control Sample			Run: SUB-T61200				02/06/15 15:35	
Lead 210		19	pCi/L		76	80	120			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Lab ID: **T15010119-001GMS**		Sample Matrix Spike			Run: SUB-T61200				02/07/15 17:07	
Lead 210		43	pCi/L		94	70	130			
Lab ID: **T15010119-001GMSD**		Sample Matrix Spike Duplicate			Run: SUB-T61200				02/07/15 18:50	
Lead 210		36	pCi/L		78	70	130	18	42.7	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4860
Lab ID: LCS-228-RA226-7531		Laboratory Control Sample				Run: TENNELEC-3_150119B				01/22/15 12:06
Radium 228		5.9	pCi/L		80	80	120			
Lab ID: MB-RA226-7531	3	Method Blank				Run: TENNELEC-3_150119B				01/22/15 12:06
Radium 228		0.8	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15010405-001EMS		Sample Matrix Spike				Run: TENNELEC-3_150119B				01/22/15 12:06
Radium 228		16	pCi/L		113	70	130			
Lab ID: C15010405-001EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150119B				01/22/15 12:06
Radium 228		15	pCi/L		101	70	130	9.8	51.9	
Method: RA-05										Batch: RA228-4884
Lab ID: LCS-228-RA226-7571		Laboratory Control Sample				Run: TENNELEC-3_150223A				02/26/15 12:34
Radium 228		6.0	pCi/L		91	80	120			
Lab ID: MB-RA226-7571	3	Method Blank				Run: TENNELEC-3_150223A				02/26/15 12:34
Radium 228		0.2	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15020623-001AMS		Sample Matrix Spike				Run: TENNELEC-3_150223A				02/26/15 12:34
Radium 228		14.8	pCi/L		96	70	130			
Lab ID: C15020623-001AMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150223A				02/26/15 12:34
Radium 228		14.4	pCi/L		94	70	130	2.7	53.9	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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ANALYTICAL SUMMARY REPORT

February 27, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15010403 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 10 samples for United Nuclear Corporation on 1/16/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010403-001	NBL-2	01/13/15 10:05	01/16/15	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved
C15010403-002	PB-3	01/13/15 11:40	01/16/15	Aqueous	Same As Above
C15010403-003	PB-4	01/13/15 12:20	01/16/15	Aqueous	Same As Above
C15010403-004	MW-6	01/13/15 13:25	01/16/15	Aqueous	Same As Above
C15010403-005	NW-1	01/13/15 9:54	01/16/15	Aqueous	Same As Above
C15010403-006	NW-4	01/13/15 10:17	01/16/15	Aqueous	Same As Above
C15010403-007	NW-3	01/13/15 10:44	01/16/15	Aqueous	Same As Above
C15010403-008	NW-5	01/13/15 11:00	01/16/15	Aqueous	Same As Above
C15010403-009	NW-2	01/13/15 11:19	01/16/15	Aqueous	Same As Above
C15010403-010	RW-A	01/13/15 11:40	01/16/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2015.02.27 15:52:50 -07:00

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010403

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2320 B**										Batch: R195300
Lab ID: **MBLK**	2	Method Blank				Run: MANTECH_150119B				01/19/15 12:47
Alkalinity, Total as CaCO3		1.0	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Lab ID: **LCS_141001**		Laboratory Control Sample				Run: MANTECH_150119B				01/19/15 13:03
Alkalinity, Total as CaCO3		255	mg/L	5.0	102	90	110			
Lab ID: **C15010399-001ADUP**	2	Sample Duplicate				Run: MANTECH_150119B				01/19/15 13:18
Alkalinity, Total as CaCO3		176	mg/L	5.0				0.2	10	
Bicarbonate as HCO3		215	mg/L	5.0				0.2	10	
Lab ID: **C15010399-002AMS**		Sample Matrix Spike				Run: MANTECH_150119B				01/19/15 13:36
Alkalinity, Total as CaCO3		443	mg/L	5.0	93	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010403

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**									Batch: TDS150119A	
Lab ID: **MB-1_150119A**		Method Blank				Run: BAL-18_150119B			01/19/15 08:41	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_150119A**		Laboratory Control Sample				Run: BAL-18_150119B			01/19/15 08:42	
Solids, Total Dissolved TDS @ 180 C		1110	mg/L	11	100	90	110			
Lab ID: **C15010403-001A DUP**		Sample Duplicate				Run: BAL-18_150119B			01/19/15 08:43	
Solids, Total Dissolved TDS @ 180 C		3570	mg/L	35				1.1	5	
Lab ID: **C15010403-002A MS**		Sample Matrix Spike				Run: BAL-18_150119B			01/19/15 08:43	
Solids, Total Dissolved TDS @ 180 C		8480	mg/L	40	104	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 02/27/15
Project: Zone-3
Work Order: C15010403

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-C_150119A	
Lab ID: pH 6.86	Initial Calibration Verification Standard								01/19/15 08:22	
pH		6.9	s.u.	0.010	100	98	102			
Lab ID: CCV - pH 7	Continuing Calibration Verification Standard								01/19/15 10:16	
pH		7.00	s.u.	0.010	100	98	102			
Method: A4500-H B									Batch: R195255	
Lab ID: C15010403-002ADUP	Sample Duplicate					Run: PHSC_101-C_150119A			01/19/15 10:55	
pH		5.48	s.u.	0.010				1.3	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation **Report Date:** 02/27/15

Project: Zone-3 **Work Order:** C15010403

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150119A	
Lab ID: ICV	Initial Calibration Verification Standard								01/19/15 12:48	
Chloride		9.87	mg/L	1.0	99	90	110			
Lab ID: CCV-011915-3	Continuing Calibration Verification Standard								01/19/15 22:43	
Chloride		10.0	mg/L	1.0	100	90	110			
Lab ID: CCV-011915-4	Continuing Calibration Verification Standard								01/20/15 02:47	
Chloride		9.81	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R195341	
Lab ID: ICB	Method Blank					Run: IC1-C_150119A			01/19/15 13:05	
Chloride		ND	mg/L	0.04						
Lab ID: LFB-011915-1	Laboratory Fortified Blank					Run: IC1-C_150119A			01/19/15 14:35	
Chloride		9.78	mg/L	1.0	98	90	110			
Lab ID: C15010400-003AMS	Sample Matrix Spike					Run: IC1-C_150119A			01/19/15 23:35	
Chloride		206	mg/L	1.0	103	90	110			
Lab ID: C15010400-003AMSD	Sample Matrix Spike Duplicate					Run: IC1-C_150119A			01/19/15 23:53	
Chloride		208	mg/L	1.0	105	90	110	0.8	20	
Method: E300.0									Analytical Run: IC2-C_150227A	
Lab ID: ICV	Initial Calibration Verification Standard								02/27/15 09:04	
Chloride		9.89	mg/L	1.0	99	90	110			
Lab ID: CCV-022715-1	Continuing Calibration Verification Standard								02/27/15 12:51	
Chloride		9.83	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R196612	
Lab ID: ICB	Method Blank					Run: IC2-C_150227A			02/27/15 12:14	
Chloride		ND	mg/L	0.01						
Lab ID: LFB-022715-1	Laboratory Fortified Blank					Run: IC2-C_150227A			02/27/15 12:33	
Chloride		10.2	mg/L	1.0	102	90	110			
Lab ID: C15010403-008AMS	Sample Matrix Spike					Run: IC2-C_150227A			02/27/15 13:27	
Chloride		246	mg/L	2.1	105	90	110			
Lab ID: C15010403-008AMSD	Sample Matrix Spike Duplicate					Run: IC2-C_150227A			02/27/15 13:44	
Chloride		247	mg/L	2.1	106	90	110	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

APPENDIX – D (2 OF 2)

SECOND QUARTER

LABORATORY QUALITY CONTROL AND

PERFORMANCE REPORT

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ANALYTICAL SUMMARY REPORT

May 18, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15040322 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 4/9/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15040322-001	509-D	04/06/15 9:07	04/09/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15040322-002	EPA-23	04/06/15 10:03	04/09/15	Aqueous	Same As Above
C15040322-003	803	04/06/15 10:50	04/09/15	Aqueous	Same As Above
C15040322-004	808	04/06/15 11:35	04/09/15	Aqueous	Same As Above
C15040322-005	802	04/06/15 12:25	04/09/15	Aqueous	Same As Above
C15040322-006	632	04/06/15 13:05	04/09/15	Aqueous	Same As Above
C15040322-007	801	04/06/15 13:50	04/09/15	Aqueous	Same As Above
C15040322-008	GW-2	04/06/15 14:40	04/09/15	Aqueous	Same As Above
C15040322-009	GW-1	04/06/15 15:35	04/09/15	Aqueous	Same As Above
C15040322-010	EPA-28	04/06/15 16:20	04/09/15	Aqueous	Same As Above
C15040322-011	EPA-28 Duplicate	04/06/15 17:00	04/09/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2015.05.18 14:02:29 -06:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Work Order: C15040322

Report Date:

CASE NARRATIVE

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R198116
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150410B			04/10/15 15:08	
Alkalinity, Total as CaCO3		1	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Lab ID: LCS_150317		Laboratory Control Sample				Run: MANTECH_150410B			04/10/15 15:22	
Alkalinity, Total as CaCO3		260	mg/L	5.0	103	90	110			
Lab ID: C15040306-001AMS		Sample Matrix Spike				Run: MANTECH_150410B			04/10/15 15:56	
Alkalinity, Total as CaCO3		696	mg/L	5.0	94	80	120			
Lab ID: C15040322-005ADUP	2	Sample Duplicate				Run: MANTECH_150410B			04/10/15 17:43	
Alkalinity, Total as CaCO3		1730	mg/L	5.0				0.8	10	
Bicarbonate as HCO3		2110	mg/L	5.0				0.8	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**										Batch: TDS150410A
Lab ID: **MB-1_150410A**		Method Blank				Run: BAL-18_150410A				04/10/15 12:34
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_150410A**		Laboratory Control Sample				Run: BAL-18_150410A				04/10/15 12:35
Solids, Total Dissolved TDS @ 180 C		1130	mg/L	11	102	90	110			
Lab ID: **C15040301-001A MS**		Sample Matrix Spike				Run: BAL-18_150410A				04/10/15 12:37
Solids, Total Dissolved TDS @ 180 C		1920	mg/L	11	102	90	110			
Lab ID: **C15040322-003A DUP**		Sample Duplicate				Run: BAL-18_150410A				04/10/15 12:42
Solids, Total Dissolved TDS @ 180 C		6420	mg/L	98				0.7	5	

Qualifiers:

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ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150423A	
Lab ID: ICV		Initial Calibration Verification Standard							04/23/15 14:36	
Selenium-IV		0.0256	mg/L	0.0010	102	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							04/23/15 14:57	
Selenium-IV		0.0262	mg/L	0.0010	105	90	110			
Method: A3114 B									Batch: 44483	
Lab ID: MB-44483		Method Blank				Run: CVAA-C202_150423A			04/23/15 14:41	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-44483		Laboratory Control Sample				Run: CVAA-C202_150423A			04/23/15 14:43	
Selenium-IV		0.0249	mg/L	0.0010	99	90	110			
Lab ID: C15040322-005CMS		Sample Matrix Spike				Run: CVAA-C202_150423A			04/23/15 14:52	
Selenium-IV		0.0256	mg/L	0.0010	102	85	115			
Lab ID: C15040322-005CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150423A			04/23/15 14:54	
Selenium-IV		0.0260	mg/L	0.0010	104	85	115	1.8	10	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150410A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/10/15 07:50	
pH		6.87	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/10/15 11:31	
pH		7.01	s.u.	0.010	100	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/10/15 14:23	
pH		6.85	s.u.	0.010	100	98	102			
Method: **A4500-H B**										Batch: R198065
Lab ID: **C15040322-008ADUP**	Sample Duplicate					Run: PHSC_101-C_150410A			04/10/15 12:28	
pH		6.44	s.u.	0.010				0.2	3	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 05/18/15
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150410B	
Lab ID: CCV-32	Continuing Calibration Verification Standard								04/10/15 15:31	
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Lab ID: CCV-47	Continuing Calibration Verification Standard								04/10/15 15:56	
Nitrogen, Ammonia as N		1.06	mg/L	0.050	106	90	110			
Method: A4500-NH3 G									Batch: R198107	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150410B			04/10/15 14:40	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150410B			04/10/15 14:43	
Nitrogen, Ammonia as N		1.96	mg/L	0.050	100	90	110			
Lab ID: C15040291-002CMS	Sample Matrix Spike					Run: TECHNICON_150410B			04/10/15 15:36	
Nitrogen, Ammonia as N		27.0	mg/L	0.50	97	90	110			
Lab ID: C15040291-002CMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150410B			04/10/15 15:38	
Nitrogen, Ammonia as N		27.7	mg/L	0.50	101	90	110	2.6	10	
Lab ID: C15040322-009DMS	Sample Matrix Spike					Run: TECHNICON_150410B			04/10/15 16:01	
Nitrogen, Ammonia as N		2.00	mg/L	0.050	102	90	110			
Lab ID: C15040322-009DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150410B			04/10/15 16:03	
Nitrogen, Ammonia as N		1.99	mg/L	0.050	102	90	110	0.5	10	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H105713	
Lab ID: **AS-ICV 25ppb-4/24/20**	Initial Calibration Verification Standard								04/24/15 16:38	
Arsenic-III		25.1	ug/L	5.0	100	87.6	114			
Lab ID: **AS-50.0-4/24/2015**	Continuing Calibration Verification Standard								04/24/15 16:50	
Arsenic-III		51.5	ug/L	5.0	103	85	115			
Method: **E1632AM**									Batch: H_R105713	
Lab ID: **AS-LFB 50ppb-4/24/2**	Laboratory Fortified Blank					Run: SUB-H105713			04/24/15 17:14	
Arsenic-III		48.9	ug/L	5.0	98	55	146			
Lab ID: **ICB**	Method Blank					Run: SUB-H105713			04/24/15 17:26	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15040351-004E**	Sample Matrix Spike					Run: SUB-H105713			04/24/15 18:38	
Arsenic-III		49.7	ug/L	5.0	100	55	146			
Lab ID: **C15040351-004E**	Sample Matrix Spike Duplicate					Run: SUB-H105713			04/24/15 18:50	
Arsenic-III		49.4	ug/L	5.0	99	55	146	0.6	20	
Method: **E1632AM**									Analytical Run: SUB-H105724	
Lab ID: **AS-ICV 25ppb-4/23/20**	Initial Calibration Verification Standard								04/23/15 12:46	
Arsenic-III		25.8	ug/L	5.0	103	87.6	114			
Lab ID: **AS-50.0-4/23/2015**	Continuing Calibration Verification Standard								04/23/15 12:58	
Arsenic-III		48.2	ug/L	5.0	96	85	115			
Lab ID: **AS-50.0-4/23/2015**	Continuing Calibration Verification Standard								04/23/15 16:10	
Arsenic-III		42.7	ug/L	5.0	85	85	115			
Method: **E1632AM**									Batch: H_R105724	
Lab ID: **AS-LFB 50ppb-4/23/2**	Laboratory Fortified Blank					Run: SUB-H105724			04/23/15 13:22	
Arsenic-III		44.5	ug/L	5.0	89	55	146			
Lab ID: **ICB**	Method Blank					Run: SUB-H105724			04/23/15 13:34	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15040322-001E**	Sample Matrix Spike					Run: SUB-H105724			04/23/15 13:58	
Arsenic-III		46.4	ug/L	5.0	93	55	146			
Lab ID: **C15040322-001E**	Sample Matrix Spike Duplicate					Run: SUB-H105724			04/23/15 14:10	
Arsenic-III		51.2	ug/L	5.0	102	55	146	9.7	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150413B	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/13/15 12:16	
Calcium		50.0	mg/L	1.0	100	95	105			
Magnesium		50.2	mg/L	1.0	100	95	105			
Potassium		50.6	mg/L	1.0	101	95	105			
Sodium		50.2	mg/L	1.0	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/13/15 12:35	
Calcium		459	mg/L	1.0	92	80	120			
Magnesium		498	mg/L	1.0	100	80	120			
Potassium		-0.0130	mg/L	1.0						
Sodium		-0.0902	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							04/13/15 12:39	
Calcium		459	mg/L	1.0	92	80	120			
Magnesium		498	mg/L	1.0	100	80	120			
Potassium		-0.00664	mg/L	1.0						
Sodium		-0.0825	mg/L	1.0						
Method: E200.7										Batch: R198165
Lab ID: MB-150413A	4	Method Blank				Run: ICP4-C_150413B			04/13/15 12:59	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-150413A	4	Laboratory Fortified Blank				Run: ICP4-C_150413B			04/13/15 13:03	
Calcium		47.3	mg/L	1.0	95	85	115			
Magnesium		46.8	mg/L	1.0	94	85	115			
Potassium		49.8	mg/L	1.0	100	85	115			
Sodium		48.4	mg/L	1.0	97	85	115			
Lab ID: C15040322-009BMS2	4	Sample Matrix Spike				Run: ICP4-C_150413B			04/13/15 20:18	
Calcium		812	mg/L	1.0	83	70	130			
Magnesium		816	mg/L	1.0	87	70	130			
Potassium		243	mg/L	1.0	92	70	130			
Sodium		632	mg/L	1.2	88	70	130			
Lab ID: C15040322-009BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150413B			04/13/15 20:22	
Calcium		817	mg/L	1.0	85	70	130	0.5	20	
Magnesium		820	mg/L	1.0	89	70	130	0.4	20	
Potassium		243	mg/L	1.0	92	70	130	0.0	20	
Sodium		634	mg/L	1.2	89	70	130	0.3	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150415B	
Lab ID: ICV	6	Initial Calibration Verification Standard							04/15/15 12:43	
Aluminum		4.97	mg/L	0.10	99	95	105			
Beryllium		0.490	mg/L	0.010	98	95	105			
Manganese		4.81	mg/L	0.010	96	95	105			
Molybdenum		0.979	mg/L	0.10	98	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Vanadium		0.969	mg/L	0.10	97	95	105			
Lab ID: ICSA	6	Interference Check Sample A							04/15/15 13:03	
Aluminum		455	mg/L	0.10	91	80	120			
Beryllium		2.00E-05	mg/L	0.010						
Manganese		-0.0194	mg/L	0.010						
Molybdenum		0.00268	mg/L	0.10						
Nickel		0.00237	mg/L	0.050						
Vanadium		1.00E-05	mg/L	0.10						
Lab ID: ICSAB	6	Interference Check Sample AB							04/15/15 13:07	
Aluminum		470	mg/L	0.10	94	80	120			
Beryllium		0.458	mg/L	0.010	92	80	120			
Manganese		0.421	mg/L	0.010	84	80	120			
Molybdenum		0.00146	mg/L	0.10						
Nickel		0.840	mg/L	0.050	84	80	120			
Vanadium		0.490	mg/L	0.10	98	80	120			
Method: E200.7									Batch: 44391	
Lab ID: MB-44391	6	Method Blank				Run: ICP4-C_150415B			04/15/15 21:40	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-44391	6	Laboratory Control Sample				Run: ICP4-C_150415B			04/15/15 21:44	
Aluminum		2.53	mg/L	0.030	101	85	115			
Beryllium		0.246	mg/L	0.0010	98	85	115			
Manganese		2.42	mg/L	0.0012	97	85	115			
Molybdenum		0.486	mg/L	0.0053	97	85	115			
Nickel		0.478	mg/L	0.0050	96	85	115			
Vanadium		0.489	mg/L	0.010	98	85	115			
Lab ID: C15040322-006CMS3	6	Sample Matrix Spike				Run: ICP4-C_150415B			04/15/15 22:51	
Aluminum		2.67	mg/L	0.075	103	70	130			
Beryllium		0.237	mg/L	0.0014	95	70	130			
Manganese		4.09	mg/L	0.0058	93	70	130			
Molybdenum		0.475	mg/L	0.026	95	70	130			
Nickel		0.471	mg/L	0.023	94	70	130			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 44391
Lab ID: C15040322-006CMS3	6	Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 22:51
Vanadium		0.482	mg/L	0.017	96	70	130			
Lab ID: C15040322-006CMSD	6	Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 22:56
Aluminum		2.70	mg/L	0.075	104	70	130	1.1	20	
Beryllium		0.236	mg/L	0.0014	94	70	130	0.2	20	
Manganese		4.10	mg/L	0.0058	93	70	130	0.2	20	
Molybdenum		0.472	mg/L	0.026	94	70	130	0.6	20	
Nickel		0.471	mg/L	0.023	94	70	130	0.0	20	
Vanadium		0.480	mg/L	0.017	96	70	130	0.3	20	
Lab ID: C15040353-003CMS3	6	Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 23:44
Aluminum		2.57	mg/L	0.075	103	70	130			
Beryllium		0.233	mg/L	0.0014	93	70	130			
Manganese		3.59	mg/L	0.0058	91	70	130			
Molybdenum		0.460	mg/L	0.026	92	70	130			
Nickel		0.461	mg/L	0.023	88	70	130			
Vanadium		0.471	mg/L	0.017	94	70	130			
Lab ID: C15040353-003CMSD	6	Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 23:48
Aluminum		2.59	mg/L	0.075	104	70	130	0.9	20	
Beryllium		0.236	mg/L	0.0014	94	70	130	1.1	20	
Manganese		3.61	mg/L	0.0058	92	70	130	0.4	20	
Molybdenum		0.470	mg/L	0.026	94	70	130	2.2	20	
Nickel		0.459	mg/L	0.023	87	70	130	0.6	20	
Vanadium		0.477	mg/L	0.017	95	70	130	1.2	20	
Method: E200.7										Analytical Run: ICP4-C_150416A
Lab ID: ICV		Initial Calibration Verification Standard								04/16/15 13:20
Aluminum		4.98	mg/L	0.10	100	95	105			
Lab ID: ICSA		Interference Check Sample A								04/16/15 13:40
Aluminum		476	mg/L	0.10	95	80	120			
Lab ID: ICSAB		Interference Check Sample AB								04/16/15 13:44
Aluminum		470	mg/L	0.10	94	80	120			
Method: E200.7										Batch: 44391
Lab ID: MB-44391		Method Blank				Run: ICP4-C_150416A				04/16/15 21:04
Aluminum		ND	mg/L	0.02						
Lab ID: LCS3-44391		Laboratory Control Sample				Run: ICP4-C_150416A				04/16/15 21:08
Aluminum		2.55	mg/L	0.030	102	85	115			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: ICPMS2-C_150416A		
Lab ID: ICV	5	Initial Calibration Verification Standard								04/16/15 10:30
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Cobalt		0.0512	mg/L	0.0010	102	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Uranium		0.0488	mg/L	0.00030	98	90	110			
Method: E200.8										Batch: 44391
Lab ID: MB-44391	5	Method Blank				Run: ICPMS2-C_150416A				04/16/15 21:46
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		4E-05	mg/L	3E-05						
Uranium		0.0001	mg/L	9E-06						
Lab ID: LCS3-44391	5	Laboratory Control Sample				Run: ICPMS2-C_150416A				04/16/15 21:49
Beryllium		0.231	mg/L	0.0010	92	85	115			
Cadmium		0.241	mg/L	0.0010	96	85	115			
Cobalt		0.441	mg/L	0.0050	88	85	115			
Lead		0.484	mg/L	0.0010	97	85	115			
Uranium		0.509	mg/L	0.00030	102	85	115			
Lab ID: C15040322-006CMS3	5	Sample Matrix Spike				Run: ICPMS2-C_150416A				04/16/15 22:30
Beryllium		0.180	mg/L	0.0010	72	70	130			
Cadmium		0.235	mg/L	0.0010	94	70	130			
Cobalt		0.455	mg/L	0.0050	91	70	130			
Lead		0.483	mg/L	0.0010	96	70	130			
Uranium		0.587	mg/L	0.00030	103	70	130			
Lab ID: C15040322-006CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150416A				04/16/15 22:33
Beryllium		0.185	mg/L	0.0010	74	70	130	2.6	20	
Cadmium		0.239	mg/L	0.0010	96	70	130	2.0	20	
Cobalt		0.456	mg/L	0.0050	91	70	130	0.3	20	
Lead		0.499	mg/L	0.0010	100	70	130	3.3	20	
Uranium		0.605	mg/L	0.00030	106	70	130	3.0	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 05/18/15
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150421A	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/21/15 13:44	
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Cobalt		0.0515	mg/L	0.0010	103	90	110			
Lead		0.0496	mg/L	0.0010	99	90	110			
Uranium		0.0495	mg/L	0.00030	99	90	110			
Method: E200.8									Batch: 44391	
Lab ID: MB-44391	4	Method Blank				Run: ICPMS2-C_150421A			04/21/15 21:16	
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		4E-05	mg/L	3E-05						
Uranium		0.0001	mg/L	9E-06						
Lab ID: LCS3-44391	4	Laboratory Control Sample				Run: ICPMS2-C_150421A			04/21/15 21:28	
Cadmium		0.249	mg/L	0.0010	100	85	115			
Cobalt		0.490	mg/L	0.0050	98	85	115			
Lead		0.499	mg/L	0.0010	100	85	115			
Uranium		0.510	mg/L	0.00030	102	85	115			
Lab ID: C15040322-006CMS3	4	Sample Matrix Spike				Run: ICPMS2-C_150421A			04/21/15 21:53	
Cadmium		0.245	mg/L	0.0010	98	70	130			
Cobalt		0.497	mg/L	0.0050	99	70	130			
Lead		0.506	mg/L	0.0010	101	70	130			
Uranium		0.584	mg/L	0.00030	102	70	130			
Lab ID: C15040322-006CMSD	4	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150421A			04/21/15 22:05	
Cadmium		0.244	mg/L	0.0010	98	70	130	0.4	20	
Cobalt		0.494	mg/L	0.0050	98	70	130	0.5	20	
Lead		0.507	mg/L	0.0010	101	70	130	0.2	20	
Uranium		0.594	mg/L	0.00030	104	70	130	1.5	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_150413A	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/13/15 08:41	
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		41.0	mg/L	1.0	102	90	110			
Lab ID: CCV-041315-3	2	Continuing Calibration Verification Standard							04/13/15 17:36	
Chloride		9.63	mg/L	1.0	96	90	110			
Sulfate		40.7	mg/L	1.0	102	90	110			
Lab ID: CCV-041315-4	2	Continuing Calibration Verification Standard							04/13/15 21:54	
Chloride		9.60	mg/L	1.0	96	90	110			
Sulfate		39.5	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R198177	
Lab ID: ICB	2	Method Blank				Run: IC2-C_150413A			04/13/15 09:00	
Chloride		ND	mg/L	0.01						
Sulfate		0.2	mg/L	0.03						
Lab ID: LFB-041315-1	2	Laboratory Fortified Blank				Run: IC2-C_150413A			04/13/15 09:18	
Chloride		10.2	mg/L	1.0	102	90	110			
Sulfate		41.3	mg/L	1.0	103	90	110			
Lab ID: C15040322-001AMS	2	Sample Matrix Spike				Run: IC2-C_150413A			04/13/15 20:40	
Chloride		598	mg/L	2.1	90	90	110			
Sulfate		2810	mg/L	8.3	107	90	110			
Lab ID: C15040322-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150413A			04/13/15 20:58	
Chloride		601	mg/L	2.1	92	90	110	0.5	20	
Sulfate		2810	mg/L	8.3	107	90	110	0.0	20	
Lab ID: C15040322-011AMS	2	Sample Matrix Spike				Run: IC2-C_150413A			04/14/15 00:58	
Chloride		344	mg/L	2.1	111	90	110			S
Sulfate		3990	mg/L	8.3	112	90	110			S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040322-011AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150413A			04/14/15 01:17	
Chloride		338	mg/L	2.1	108	90	110	1.8	20	
Sulfate		3790	mg/L	8.3	88	90	110	5.0	20	S
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_150416A	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/16/15 15:53	
Chloride		10.6	mg/L	1.0	106	90	110			
Sulfate		41.4	mg/L	1.0	103	90	110			
Lab ID: CCV-041615-2	2	Continuing Calibration Verification Standard							04/16/15 22:58	
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		42.2	mg/L	1.0	105	90	110			
Method: E300.0									Batch: R198355	
Lab ID: ICB	2	Method Blank				Run: IC2-C_150416A			04/16/15 16:11	
Chloride		0.03	mg/L	0.01						
Sulfate		0.1	mg/L	0.03						
Lab ID: LFB-041615-1	2	Laboratory Fortified Blank				Run: IC2-C_150416A			04/16/15 16:48	
Chloride		10.9	mg/L	1.0	109	90	110			
Sulfate		41.8	mg/L	1.0	104	90	110			
Lab ID: LFBD-041615-1	2	Laboratory Fortified Blank Duplicate				Run: IC2-C_150416A			04/16/15 17:06	
Chloride		10.5	mg/L	1.0	105	90	110			
Sulfate		42.1	mg/L	1.0	105	90	110			
Lab ID: C15040322-005AMS	2	Sample Matrix Spike				Run: IC2-C_150416A			04/16/15 23:53	
Chloride		435	mg/L	2.1	116	90	110			S
Sulfate		3920	mg/L	8.3	109	90	110			
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040322-005AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150416A			04/17/15 00:12	
Chloride		429	mg/L	2.1	113	90	110	1.3	20	S
Sulfate		3910	mg/L	8.3	108	90	110	0.1	20	
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150410A	
Lab ID: CCV-30	Continuing Calibration Verification Standard								04/10/15 11:54	
Nitrogen, Nitrate+Nitrite as N		1.09	mg/L	0.10	109	90	110			
Method: E353.2									Batch: R198094	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150410A			04/10/15 10:42	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150410A			04/10/15 10:47	
Nitrogen, Nitrate+Nitrite as N		2.00	mg/L	0.10	102	90	110			
Lab ID: C15040274-001DMS	Sample Matrix Spike					Run: TECHNICON_150410A			04/10/15 10:52	
Nitrogen, Nitrate+Nitrite as N		28.0	mg/L	1.0	94	90	110			
Lab ID: C15040274-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150410A			04/10/15 10:54	
Nitrogen, Nitrate+Nitrite as N		29.9	mg/L	1.0	104	90	110	6.6	10	
Method: E353.2									Batch: R198200	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150414A			04/14/15 12:12	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150414A			04/14/15 12:17	
Nitrogen, Nitrate+Nitrite as N		1.94	mg/L	0.10	99	90	110			
Lab ID: C15040322-004DMS	Sample Matrix Spike					Run: TECHNICON_150414A			04/14/15 12:22	
Nitrogen, Nitrate+Nitrite as N		92.0	mg/L	2.5	98	90	110			
Lab ID: C15040322-004DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150414A			04/14/15 12:25	
Nitrogen, Nitrate+Nitrite as N		89.2	mg/L	2.5	93	90	110	3.1	10	
Lab ID: C15040351-002DMS	Sample Matrix Spike					Run: TECHNICON_150414A			04/14/15 13:00	
Nitrogen, Nitrate+Nitrite as N		89.6	mg/L	2.5	106	90	110			
Lab ID: C15040351-002DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150414A			04/14/15 13:02	
Nitrogen, Nitrate+Nitrite as N		89.3	mg/L	2.5	105	90	110	0.3	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R198171	
Lab ID: 041315_CCV_2	9	Continuing Calibration Verification Standard							04/13/15 15:32	
Bromodichloromethane		12.4	ug/L	1.0	124	70	130			
Bromoform		12.4	ug/L	1.0	124	70	130			
Chlorodibromomethane		11.9	ug/L	1.0	119	70	130			
Chloroform		12.2	ug/L	1.0	122	70	130			
Trihalomethanes, Total		49.0	ug/L	1.0	123	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	117	70	130			
Surr: Dibromofluoromethane				1.0	116	70	130			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	103	70	130			
Lab ID: 041315_CCV_20	9	Continuing Calibration Verification Standard							04/14/15 02:02	
Bromodichloromethane		12.7	ug/L	1.0	127	70	130			
Bromoform		11.6	ug/L	1.0	116	70	130			
Chlorodibromomethane		12.2	ug/L	1.0	122	70	130			
Chloroform		12.3	ug/L	1.0	123	70	130			
Trihalomethanes, Total		48.9	ug/L	1.0	122	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	70	130			
Surr: Dibromofluoromethane				1.0	112	70	130			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	112	70	130			
Method: E624									Batch: R198171	
Lab ID: 041315_LCS_3	9	Laboratory Control Sample				Run: SATURNCA_150413A			04/13/15 16:07	
Bromodichloromethane		12.6	ug/L	1.0	126	60	130			
Bromoform		12.4	ug/L	1.0	124	60	142			
Chlorodibromomethane		13.2	ug/L	1.0	132	67	134			
Chloroform		11.8	ug/L	1.0	118	56	135			
Trihalomethanes, Total		50.0	ug/L	1.0	125	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	116	43	142			
Surr: p-Bromofluorobenzene				1.0	112	70	130			
Surr: Toluene-d8				1.0	107	70	130			
Lab ID: 041315_MBLK_5	9	Method Blank				Run: SATURNCA_150413A			04/13/15 17:17	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	111	73.7	126			
Surr: Dibromofluoromethane				1.0	112	64.4	131			
Surr: p-Bromofluorobenzene				1.0	102	67.1	133			
Surr: Toluene-d8				1.0	104	79.7	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Batch: R198171	
Lab ID: C15040351-001HMS	9	Sample Matrix Spike			Run: SATURNCA_150413A				04/14/15 00:17	
Bromodichloromethane		129	ug/L	5.0	129	60	130			
Bromoform		124	ug/L	5.0	124	60	142			
Chlorodibromomethane		123	ug/L	5.0	123	67	134			
Chloroform		222	ug/L	5.0	119	56	135			
Trihalomethanes, Total		598	ug/L	5.0	124	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	105	43	142			
Surr: p-Bromofluorobenzene				1.0	116	70	130			
Surr: Toluene-d8				1.0	112	70	130			
Lab ID: C15040351-001HMSD	9	Sample Matrix Spike Duplicate			Run: SATURNCA_150413A				04/14/15 00:52	
Bromodichloromethane		132	ug/L	5.0	132	60	130	2.1	20	S
Bromoform		116	ug/L	5.0	116	60	142	6.3	20	
Chlorodibromomethane		121	ug/L	5.0	121	67	134	1.6	20	
Chloroform		220	ug/L	5.0	117	56	135	0.9	20	
Trihalomethanes, Total		589	ug/L	5.0	122	70	130	1.5	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	106	43	142			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	111	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E900.1**										Batch: GA-0872
Lab ID: **MB-GA-0872**	3	Method Blank				Run: G5000W_150415A				04/15/15 13:16
Gross Alpha minus Rn & U		2	pCi/L							
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: **LCS-GA-0872**		Laboratory Control Sample				Run: G5000W_150415A				04/15/15 13:16
Gross Alpha minus Rn & U		33.1	pCi/L		90	80	120			
Lab ID: **C15040394-001DMS**		Sample Matrix Spike				Run: G5000W_150415A				04/15/15 13:17
Gross Alpha minus Rn & U		35.4	pCi/L		90	70	130			
Lab ID: **C15040394-001DMSD**		Sample Matrix Spike Duplicate				Run: G5000W_150415A				04/15/15 14:57
Gross Alpha minus Rn & U		31.8	pCi/L		79	70	130	11	52.9	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E903.0**										Batch: RA226-7617
Lab ID: **MB-RA226-7617**	3	Method Blank				Run: G542M_150413B				04/21/15 07:28
Radium 226		0.2	pCi/L							
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: **LCS-RA226-7617**		Laboratory Control Sample				Run: G542M_150413B				04/21/15 07:28
Radium 226		9.7	pCi/L		92	80	120			
Lab ID: **C15040326-001AMS**		Sample Matrix Spike				Run: G542M_150413B				04/21/15 09:02
Radium 226		24	pCi/L		97	70	130			
Lab ID: **C15040326-001AMSD**		Sample Matrix Spike Duplicate				Run: G542M_150413B				04/21/15 09:02
Radium 226		21	pCi/L		87	70	130	9.7	49.2	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2218	
Lab ID: LCS-RA-TH-ISO-2218		Laboratory Control Sample				Run: ALPHANALYST_150413A			04/16/15 09:54	
Thorium 230		5.8	pCi/L		88	80	120			
Lab ID: C15040290-001CMS		Sample Matrix Spike				Run: ALPHANALYST_150413A			04/16/15 14:20	
Thorium 230		15	pCi/L		110	70	130			
Lab ID: C15040290-001CMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150413A			04/16/15 14:20	
Thorium 230		13	pCi/L		100	70	130	8.9	48	
Lab ID: MB-RA-TH-ISO-2218	3	Method Blank				Run: ALPHANALYST_150413A			04/16/15 14:20	
Thorium 230		0.05	pCi/L							U
Thorium 230 precision (±)		0.09	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0545
Lab ID: MB-PB-210-0545	3	Method Blank				Run: SUB-T62509				04/22/15 11:49
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0545		Laboratory Control Sample				Run: SUB-T62509				04/22/15 13:33
Lead 210		20	pCi/L		97	80	120			
Lab ID: T15040055-001FMS		Sample Matrix Spike				Run: SUB-T62509				04/22/15 16:28
Lead 210		38	pCi/L		98	70	130			
Lab ID: T15040055-001FMSD		Sample Matrix Spike Duplicate				Run: SUB-T62509				04/22/15 17:40
Lead 210		39	pCi/L		100	70	130	2.0	43.7	

Qualifiers:

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MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/18/15
Project: SW Alluvium
Work Order: C15040322

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4911
Lab ID: LCS-228-RA226-7617		Laboratory Control Sample				Run: TENNELEC-3_150413C				04/16/15 09:30
Radium 228		6.9	pCi/L		113	80	120			
Lab ID: MB-RA226-7617	3	Method Blank				Run: TENNELEC-3_150413C				04/16/15 09:30
Radium 228		-0.2	pCi/L							U
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15040326-002AMS		Sample Matrix Spike				Run: TENNELEC-3_150413C				04/16/15 09:31
Radium 228		11	pCi/L		84	70	130			
Lab ID: C15040326-002AMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150413C				04/16/15 09:31
Radium 228		15	pCi/L		108	70	130	25	53.2	

Qualifiers:

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ANALYTICAL SUMMARY REPORT

May 19, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15040353 Quote ID: C129 - Quarterly Long List

Project Name: SW Alluvium

Energy Laboratories, Inc. Casper WY received the following 5 samples for United Nuclear Corporation on 4/10/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15040353-001	624	04/07/15 8:50	04/10/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15040353-002	SBL-1	04/07/15 9:42	04/10/15	Aqueous	Same As Above
C15040353-003	GW-3	04/07/15 10:42	04/10/15	Aqueous	Same As Above
C15040353-004	EPA-25	04/07/15 12:00	04/10/15	Aqueous	Same As Above
C15040353-005	627	04/07/15 13:00	04/10/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2015.05.19 14:04:18 -06:00

CLIENT: United Nuclear Corporation
Project: SW Alluvium
Work Order: C15040353

Report Date:

CASE NARRATIVE

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

TH230 ANALYSIS
USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R198116
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150410B				04/10/15 15:08
Alkalinity, Total as CaCO3		1	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Lab ID: LCS_150317		Laboratory Control Sample				Run: MANTECH_150410B				04/10/15 15:22
Alkalinity, Total as CaCO3		260	mg/L	5.0	103	90	110			
Lab ID: C15040351-005AMS		Sample Matrix Spike				Run: MANTECH_150410B				04/10/15 20:09
Alkalinity, Total as CaCO3		295	mg/L	5.0	101	80	120			
Lab ID: C15040353-003ADUP	2	Sample Duplicate				Run: MANTECH_150410B				04/10/15 21:37
Alkalinity, Total as CaCO3		1470	mg/L	5.0				0.0	10	
Bicarbonate as HCO3		1790	mg/L	5.0				0.0	10	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS150413A
Lab ID: MB-1_150413A		Method Blank				Run: BAL-18_150413B				04/13/15 10:08
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_150413A		Laboratory Control Sample				Run: BAL-18_150413B				04/13/15 10:09
Solids, Total Dissolved TDS @ 180 C		1150	mg/L	11	103	90	110			
Lab ID: C15040353-003A DUP		Sample Duplicate				Run: BAL-18_150413B				04/13/15 10:21
Solids, Total Dissolved TDS @ 180 C		5530	mg/L	40				0.2	5	
Lab ID: C15040353-004A MS		Sample Matrix Spike				Run: BAL-18_150413B				04/13/15 10:21
Solids, Total Dissolved TDS @ 180 C		8390	mg/L	40	100	90	110			

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150423A	
Lab ID: ICV		Initial Calibration Verification Standard								04/23/15 14:36
Selenium-IV		0.0256	mg/L	0.0010	102	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard								04/23/15 14:57
Selenium-IV		0.0262	mg/L	0.0010	105	90	110			
Method: A3114 B										Batch: 44483
Lab ID: MB-44483		Method Blank				Run: CVAA-C202_150423A				04/23/15 14:41
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-44483		Laboratory Control Sample				Run: CVAA-C202_150423A				04/23/15 14:43
Selenium-IV		0.0249	mg/L	0.0010	99	90	110			
Lab ID: C15040353-004CMS		Sample Matrix Spike				Run: CVAA-C202_150423A				04/23/15 15:27
Selenium-IV		0.0254	mg/L	0.0010	101	85	115			
Lab ID: C15040353-004CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150423A				04/23/15 15:29
Selenium-IV		0.0253	mg/L	0.0010	101	85	115	0.4	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 05/19/15
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150413A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/13/15 08:23	
pH		6.85	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/13/15 10:19	
pH		7.00	s.u.	0.010	100	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/13/15 11:47	
pH		6.82	s.u.	0.010	99	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/13/15 14:55	
pH		6.82	s.u.	0.010	99	98	102			
Method: **A4500-H B**										Batch: R198113
Lab ID: **C15040353-003ADUP**	Sample Duplicate					Run: PHSC_101-C_150413A			04/13/15 10:33	
pH		6.88	s.u.	0.010				0.1	3	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150413A	
Lab ID: CCV-17		Continuing Calibration Verification Standard							04/13/15 12:50	
Nitrogen, Ammonia as N		1.01	mg/L	0.050	101	90	110			
Lab ID: CCV-32		Continuing Calibration Verification Standard							04/13/15 13:15	
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Method: A4500-NH3 G									Batch: R198142	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150413A			04/13/15 12:23	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150413A			04/13/15 12:26	
Nitrogen, Ammonia as N		1.93	mg/L	0.050	98	90	110			
Lab ID: C15040353-003DMS		Sample Matrix Spike				Run: TECHNICON_150413A			04/13/15 13:20	
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Lab ID: C15040353-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150413A			04/13/15 13:22	
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	90	110	0.5	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H105784	
Lab ID: **AS-ICV 25ppb-4/28/20**		Initial Calibration Verification Standard							04/28/15 17:59	
Arsenic-III		26.0	ug/L	5.0	104	87.6	114			
Lab ID: **AS-50.0-4/28/2015**		Continuing Calibration Verification Standard							04/28/15 18:11	
Arsenic-III		54.6	ug/L	5.0	109	85	115			
Method: **E1632AM**									Batch: H_R105784	
Lab ID: **AS-LFB 50ppb-4/28/2**		Laboratory Fortified Blank				Run: SUB-H105784			04/28/15 18:35	
Arsenic-III		51.7	ug/L	5.0	103	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H105784			04/28/15 18:47	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **H15040178-010E MS**		Sample Matrix Spike				Run: SUB-H105784			04/28/15 19:11	
Arsenic-III		51.6	ug/L	5.0	103	55	146			
Lab ID: **H15040178-010E MSD**		Sample Matrix Spike Duplicate				Run: SUB-H105784			04/28/15 19:23	
Arsenic-III		56.2	ug/L	5.0	113	55	146	8.6	20	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150414B	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/14/15 13:01	
Calcium		49.9	mg/L	1.0	100	95	105			
Magnesium		49.8	mg/L	1.0	100	95	105			
Potassium		50.0	mg/L	1.0	100	95	105			
Sodium		49.8	mg/L	1.0	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/14/15 13:21	
Calcium		460	mg/L	1.0	92	80	120			
Magnesium		499	mg/L	1.0	100	80	120			
Potassium		0.0198	mg/L	1.0						
Sodium		-0.0285	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							04/14/15 13:25	
Calcium		464	mg/L	1.0	93	80	120			
Magnesium		505	mg/L	1.0	101	80	120			
Potassium		0.00582	mg/L	1.0						
Sodium		0.0131	mg/L	1.0						
Method: E200.7										Batch: R198225
Lab ID: MB-150414A	4	Method Blank				Run: ICP4-C_150414B			04/14/15 13:45	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-150414A	4	Laboratory Fortified Blank				Run: ICP4-C_150414B			04/14/15 13:49	
Calcium		47.9	mg/L	1.0	96	85	115			
Magnesium		47.2	mg/L	1.0	94	85	115			
Potassium		52.0	mg/L	1.0	104	85	115			
Sodium		49.6	mg/L	1.0	99	85	115			
Lab ID: C15040353-001BMS2	4	Sample Matrix Spike				Run: ICP4-C_150414B			04/14/15 15:55	
Calcium		909	mg/L	1.0	84	70	130			
Magnesium		654	mg/L	1.0	92	70	130			
Potassium		238	mg/L	1.0	91	70	130			
Sodium		524	mg/L	1.2	89	70	130			
Lab ID: C15040353-001BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150414B			04/14/15 15:59	
Calcium		907	mg/L	1.0	83	70	130	0.2	20	
Magnesium		652	mg/L	1.0	92	70	130	0.2	20	
Potassium		237	mg/L	1.0	91	70	130	0.6	20	
Sodium		523	mg/L	1.2	88	70	130	0.2	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150415B	
Lab ID: ICV	7	Initial Calibration Verification Standard							04/15/15 12:43	
Aluminum		4.97	mg/L	0.10	99	95	105			
Beryllium		0.490	mg/L	0.010	98	95	105			
Calcium		50.1	mg/L	1.0	100	95	105			
Manganese		4.81	mg/L	0.010	96	95	105			
Molybdenum		0.979	mg/L	0.10	98	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Vanadium		0.969	mg/L	0.10	97	95	105			
Lab ID: ICSA	7	Interference Check Sample A							04/15/15 13:03	
Aluminum		455	mg/L	0.10	91	80	120			
Beryllium		2.00E-05	mg/L	0.010						
Calcium		454	mg/L	1.0	91	80	120			
Manganese		-0.0194	mg/L	0.010						
Molybdenum		0.00268	mg/L	0.10						
Nickel		0.00237	mg/L	0.050						
Vanadium		1.00E-05	mg/L	0.10						
Lab ID: ICSAB	7	Interference Check Sample AB							04/15/15 13:07	
Aluminum		470	mg/L	0.10	94	80	120			
Beryllium		0.458	mg/L	0.010	92	80	120			
Calcium		462	mg/L	1.0	92	80	120			
Manganese		0.421	mg/L	0.010	84	80	120			
Molybdenum		0.00146	mg/L	0.10						
Nickel		0.840	mg/L	0.050	84	80	120			
Vanadium		0.490	mg/L	0.10	98	80	120			
Method: E200.7									Batch: 44391	
Lab ID: MB-44391	6	Method Blank				Run: ICP4-C_150415B			04/15/15 21:40	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-44391	6	Laboratory Control Sample				Run: ICP4-C_150415B			04/15/15 21:44	
Aluminum		2.53	mg/L	0.030	101	85	115			
Beryllium		0.246	mg/L	0.0010	98	85	115			
Manganese		2.42	mg/L	0.0012	97	85	115			
Molybdenum		0.486	mg/L	0.0053	97	85	115			
Nickel		0.478	mg/L	0.0050	96	85	115			
Vanadium		0.489	mg/L	0.010	98	85	115			
Lab ID: C15040353-003CMS3	6	Sample Matrix Spike				Run: ICP4-C_150415B			04/15/15 23:44	
Aluminum		2.57	mg/L	0.075	103	70	130			
Beryllium		0.233	mg/L	0.0014	93	70	130			

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 44391
Lab ID: C15040353-003CMS3	6	Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 23:44
Manganese		3.59	mg/L	0.0058	91	70	130			
Molybdenum		0.460	mg/L	0.026	92	70	130			
Nickel		0.461	mg/L	0.023	88	70	130			
Vanadium		0.471	mg/L	0.017	94	70	130			
Lab ID: C15040353-003CMSD	6	Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 23:48
Aluminum		2.59	mg/L	0.075	104	70	130	0.9	20	
Beryllium		0.236	mg/L	0.0014	94	70	130	1.1	20	
Manganese		3.61	mg/L	0.0058	92	70	130	0.4	20	
Molybdenum		0.470	mg/L	0.026	94	70	130	2.2	20	
Nickel		0.459	mg/L	0.023	87	70	130	0.6	20	
Vanadium		0.477	mg/L	0.017	95	70	130	1.2	20	
Method: E200.7										Batch: R198287
Lab ID: MB-150415A		Method Blank				Run: ICP4-C_150415B				04/15/15 13:27
Calcium		ND	mg/L	0.01						
Lab ID: LFB-150415A		Laboratory Fortified Blank				Run: ICP4-C_150415B				04/15/15 13:31
Calcium		46.7	mg/L	1.0	93	85	115			
Lab ID: C15040417-002BMS2		Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 19:57
Calcium		316	mg/L	1.0	84	70	130			
Lab ID: C15040417-002BMSD		Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 20:01
Calcium		320	mg/L	1.0	87	70	130	1.1	20	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150416A	
Lab ID: ICV	5	Initial Calibration Verification Standard							04/16/15 10:30	
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Cobalt		0.0512	mg/L	0.0010	102	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Uranium		0.0488	mg/L	0.00030	98	90	110			
Method: E200.8									Batch: 44391	
Lab ID: MB-44391	5	Method Blank				Run: ICPMS2-C_150416A			04/16/15 21:46	
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		4E-05	mg/L	3E-05						
Uranium		0.0001	mg/L	9E-06						
Lab ID: LCS3-44391	5	Laboratory Control Sample				Run: ICPMS2-C_150416A			04/16/15 21:49	
Beryllium		0.231	mg/L	0.0010	92	85	115			
Cadmium		0.241	mg/L	0.0010	96	85	115			
Cobalt		0.441	mg/L	0.0050	88	85	115			
Lead		0.484	mg/L	0.0010	97	85	115			
Uranium		0.509	mg/L	0.00030	102	85	115			
Lab ID: C15040353-003CMS3	5	Sample Matrix Spike				Run: ICPMS2-C_150416A			04/16/15 23:45	
Beryllium		0.195	mg/L	0.0010	78	70	130			
Cadmium		0.225	mg/L	0.0010	90	70	130			
Cobalt		0.472	mg/L	0.0050	93	70	130			
Lead		0.470	mg/L	0.0010	94	70	130			
Uranium		0.860	mg/L	0.00030	99	70	130			
Lab ID: C15040353-003CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150416A			04/16/15 23:57	
Beryllium		0.196	mg/L	0.0010	79	70	130	0.5	20	
Cadmium		0.227	mg/L	0.0010	91	70	130	0.9	20	
Cobalt		0.489	mg/L	0.0050	96	70	130	3.4	20	
Lead		0.471	mg/L	0.0010	94	70	130	0.0	20	
Uranium		0.865	mg/L	0.00030	100	70	130	0.6	20	

Qualifiers:

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MDC - Minimum detectable concentration
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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150421A	
Lab ID: ICV	10 Initial Calibration Verification Standard								04/21/15 13:44	
Aluminum		0.0509	mg/L	0.0010	102	90	110			
Beryllium		0.0501	mg/L	0.0010	100	90	110			
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Cobalt		0.0515	mg/L	0.0010	103	90	110			
Lead		0.0496	mg/L	0.0010	99	90	110			
Manganese		0.0509	mg/L	0.0010	102	90	110			
Molybdenum		0.0495	mg/L	0.0010	99	90	110			
Nickel		0.0516	mg/L	0.0010	103	90	110			
Uranium		0.0495	mg/L	0.00030	99	90	110			
Vanadium		0.0507	mg/L	0.0010	101	90	110			
Method: E200.8									Batch: 44391	
Lab ID: MB-44391	10 Method Blank					Run: ICPMS2-C_150421A			04/21/15 21:16	
Aluminum		0.0007	mg/L	0.0005						
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		4E-05	mg/L	3E-05						
Manganese		ND	mg/L	7E-05						
Molybdenum		0.0002	mg/L	8E-05						
Nickel		0.0001	mg/L	9E-05						
Uranium		0.0001	mg/L	9E-06						
Vanadium		ND	mg/L	0.002						
Lab ID: LCS3-44391	10 Laboratory Control Sample					Run: ICPMS2-C_150421A			04/21/15 21:28	
Aluminum		2.48	mg/L	0.030	99	85	115			
Beryllium		0.242	mg/L	0.0010	97	85	115			
Cadmium		0.249	mg/L	0.0010	100	85	115			
Cobalt		0.490	mg/L	0.0050	98	85	115			
Lead		0.499	mg/L	0.0010	100	85	115			
Manganese		2.49	mg/L	0.0010	100	85	115			
Molybdenum		0.490	mg/L	0.0010	98	85	115			
Nickel		0.472	mg/L	0.0050	94	85	115			
Uranium		0.510	mg/L	0.00030	102	85	115			
Vanadium		0.495	mg/L	0.010	99	85	115			
Lab ID: C15040322-006CMS3	10 Sample Matrix Spike					Run: ICPMS2-C_150421A			04/21/15 21:53	
Aluminum		2.65	mg/L	0.030	103	70	130			
Beryllium		0.217	mg/L	0.0010	87	70	130			
Cadmium		0.245	mg/L	0.0010	98	70	130			
Cobalt		0.497	mg/L	0.0050	99	70	130			
Lead		0.506	mg/L	0.0010	101	70	130			
Manganese		4.41	mg/L	0.0010	100	70	130			
Molybdenum		0.519	mg/L	0.0010	104	70	130			
Nickel		0.513	mg/L	0.0050	99	70	130			

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 05/19/15
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 44391
Lab ID: C15040322-006CMS3	10	Sample Matrix Spike				Run: ICPMS2-C_150421A				04/21/15 21:53
Uranium		0.584	mg/L	0.00030	102	70	130			
Vanadium		0.509	mg/L	0.010	102	70	130			
Lab ID: C15040322-006CMSD	10	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150421A				04/21/15 22:05
Aluminum		2.65	mg/L	0.030	103	70	130	0.0	20	
Beryllium		0.218	mg/L	0.0010	87	70	130	0.1	20	
Cadmium		0.244	mg/L	0.0010	98	70	130	0.4	20	
Cobalt		0.494	mg/L	0.0050	98	70	130	0.5	20	
Lead		0.507	mg/L	0.0010	101	70	130	0.2	20	
Manganese		4.40	mg/L	0.0010	100	70	130	0.2	20	
Molybdenum		0.517	mg/L	0.0010	103	70	130	0.4	20	
Nickel		0.510	mg/L	0.0050	99	70	130	0.5	20	
Uranium		0.594	mg/L	0.00030	104	70	130	1.5	20	
Vanadium		0.507	mg/L	0.010	101	70	130	0.4	20	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150414A	
Lab ID: ICV		Initial Calibration Verification Standard							04/13/15 09:27	
Chloride		10.0	mg/L	1.0	100	90	110			
Lab ID: CCV-041315-2		Continuing Calibration Verification Standard							04/13/15 14:06	
Chloride		9.91	mg/L	1.0	99	90	110			
Lab ID: CCV-041315-3		Continuing Calibration Verification Standard							04/13/15 18:10	
Chloride		9.84	mg/L	1.0	98	90	110			
Method: E300.0									Batch: R198172	
Lab ID: ICB		Method Blank				Run: IC1-C_150414A			04/13/15 09:44	
Chloride		ND	mg/L	0.04						
Lab ID: LFB-041315-1		Laboratory Fortified Blank				Run: IC1-C_150414A			04/13/15 10:02	
Chloride		10.4	mg/L	1.0	104	90	110			
Lab ID: C15040361-001AMS		Sample Matrix Spike				Run: IC1-C_150414A			04/13/15 10:54	
Chloride		36.9	mg/L	1.0	98	90	110			
Lab ID: C15040361-001AMSD		Sample Matrix Spike Duplicate				Run: IC1-C_150414A			04/13/15 11:11	
Chloride		36.8	mg/L	1.0	97	90	110	0.2	20	
Method: E300.0									Analytical Run: IC2-C_150414A	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/14/15 16:59	
Chloride		9.86	mg/L	1.0	99	90	110			
Sulfate		40.3	mg/L	1.0	101	90	110			
Lab ID: CCV-041515-3	2	Continuing Calibration Verification Standard							04/15/15 02:33	
Chloride		9.63	mg/L	1.0	96	90	110			
Sulfate		40.3	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R198301	
Lab ID: ICB	2	Method Blank				Run: IC2-C_150414A			04/14/15 17:17	
Chloride		ND	mg/L	0.01						
Sulfate		0.1	mg/L	0.03						
Lab ID: LFB-041515-1	2	Laboratory Fortified Blank				Run: IC2-C_150414A			04/14/15 17:35	
Chloride		9.94	mg/L	1.0	99	90	110			
Sulfate		40.8	mg/L	1.0	102	90	110			
Lab ID: C15040353-001AMS	2	Sample Matrix Spike				Run: IC2-C_150414A			04/15/15 05:08	
Chloride		438	mg/L	2.1	108	90	110			
Sulfate		3020	mg/L	8.3	108	90	110			
Lab ID: C15040353-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150414A			04/15/15 05:26	
Chloride		432	mg/L	2.1	105	90	110	1.4	20	
Sulfate		2970	mg/L	8.3	103	90	110	1.5	20	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: SW Alluvium

Report Date: 05/19/15
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150414A	
Lab ID: CCV-31	Continuing Calibration Verification Standard								04/14/15 13:28	
Nitrogen, Nitrate+Nitrite as N		1.04	mg/L	0.10	104	90	110			
Method: E353.2									Batch: R198200	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150414A			04/14/15 12:12	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150414A			04/14/15 12:17	
Nitrogen, Nitrate+Nitrite as N		1.94	mg/L	0.10	99	90	110			
Lab ID: C15040353-001DMS	Sample Matrix Spike					Run: TECHNICON_150414A			04/14/15 13:35	
Nitrogen, Nitrate+Nitrite as N		175	mg/L	5.0	106	90	110			
Lab ID: C15040353-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150414A			04/14/15 13:37	
Nitrogen, Nitrate+Nitrite as N		177	mg/L	5.0	108	90	110	1.1	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Analytical Run: R198169
Lab ID: 13-Apr-15_CCV_6	9	Continuing Calibration Verification Standard								04/13/15 15:11
Bromodichloromethane		11.8	ug/L	1.0	118	70	130			
Bromoform		10.5	ug/L	1.0	105	70	130			
Chlorodibromomethane		9.92	ug/L	1.0	99	70	130			
Chloroform		11.8	ug/L	1.0	118	70	130			
Trihalomethanes, Total		44.0	ug/L	1.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	108	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	108	70	130			
Method: E624										Batch: R198169
Lab ID: 13-Apr-15_LCS_3	9	Laboratory Control Sample				Run: 5975VOC1_150413A				04/13/15 12:43
Bromodichloromethane		11.6	ug/L	1.0	116	60	130			
Bromoform		10.7	ug/L	1.0	107	60	142			
Chlorodibromomethane		10.4	ug/L	1.0	104	67	134			
Chloroform		10.0	ug/L	1.0	100	56	135			
Trihalomethanes, Total		42.7	ug/L	1.0	107	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	96	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Lab ID: 13-Apr-15_MBLK_5	9	Method Blank				Run: 5975VOC1_150413A				04/13/15 13:53
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	130	64.4	131			
Surr: p-Bromofluorobenzene				1.0	111	67.1	133			
Surr: Toluene-d8				1.0	101	79.7	125			
Lab ID: C15040353-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150413A				04/13/15 21:20
Bromodichloromethane		124	ug/L	5.0	124	60	130			
Bromoform		104	ug/L	5.0	104	60	142			
Chlorodibromomethane		110	ug/L	5.0	110	67	134			
Chloroform		122	ug/L	5.0	121	56	135			
Trihalomethanes, Total		460	ug/L	5.0	115	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	115	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	106	70	130			

Qualifiers:

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ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R198169
Lab ID: C15040353-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150413A				04/13/15 21:55
Bromodichloromethane		123	ug/L	5.0	123	60	130	1.0	20	
Bromoform		106	ug/L	5.0	106	60	142	1.9	20	
Chlorodibromomethane		109	ug/L	5.0	109	67	134	0.4	20	
Chloroform		120	ug/L	5.0	118	56	135	2.0	20	
Trihalomethanes, Total		458	ug/L	5.0	114	70	130	0.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	112	43	142			
Surr: p-Bromofluorobenzene				1.0	105	70	130			
Surr: Toluene-d8				1.0	105	70	130			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E900.1**										Batch: GA-0871
Lab ID: **MB-GA-0871**	3	Method Blank				Run: BERTHOLD 770-1_150413A				04/13/15 21:41
Gross Alpha minus Rn & U		-0.6	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.7	pCi/L							
Gross Alpha minus Rn & U MDC		1	pCi/L							
Lab ID: **LCS-GA-0871**		Laboratory Control Sample				Run: BERTHOLD 770-1_150413A				04/13/15 21:41
Gross Alpha minus Rn & U		35.5	pCi/L		105	80	120			
Lab ID: **C15040353-001GMS**		Sample Matrix Spike				Run: BERTHOLD 770-1_150413A				04/13/15 23:16
Gross Alpha minus Rn & U		64.9	pCi/L		93	70	130			
Lab ID: **C15040353-001GMSD**		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_150413A				04/13/15 23:16
Gross Alpha minus Rn & U		71.1	pCi/L		102	70	130	9.2	52.7	

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7619
Lab ID: C15040351-003GMS		Sample Matrix Spike				Run: G5000W_150414B				04/22/15 14:11
Radium 226		20	pCi/L		87	70	130			
Lab ID: C15040351-003GMSD		Sample Matrix Spike Duplicate				Run: G5000W_150414B				04/22/15 14:11
Radium 226		19	pCi/L		82	70	130	5.2	49.2	
Lab ID: MB-RA226-7619	3	Method Blank				Run: G5000W_150414B				04/22/15 15:45
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7619		Laboratory Control Sample				Run: G5000W_150414B				04/22/15 15:45
Radium 226		9.2	pCi/L		88	80	120			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2219	
Lab ID: LCS-RA-TH-ISO-2219		Laboratory Control Sample				Run: ALPHANALYST_150415A			04/17/15 10:24	
Thorium 230		6.2	pCi/L		92	80	120			
Lab ID: C15040351-011GMS		Sample Matrix Spike				Run: ALPHANALYST_150415A			04/17/15 16:12	
Thorium 230		13.1	pCi/L		99	70	130			
Lab ID: C15040351-011GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150415A			04/17/15 16:12	
Thorium 230		13.0	pCi/L		97	70	130	1.3	48	
Lab ID: MB-RA-TH-ISO-2219	3	Method Blank				Run: ALPHANALYST_150415A			04/17/15 16:12	
Thorium 230		0.2	pCi/L							U
Thorium 230 precision (±)		0.2	pCi/L							
Thorium 230 MDC		0.3	pCi/L							

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0									Batch: T_PB-210-0545	
Lab ID: MB-PB-210-0545	3	Method Blank				Run: SUB-T62509			04/22/15 11:49	
Lead 210		0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0545		Laboratory Control Sample				Run: SUB-T62509			04/22/15 13:33	
Lead 210		20	pCi/L		97	80	120			
Lab ID: T15040055-001FMS		Sample Matrix Spike				Run: SUB-T62509			04/22/15 16:28	
Lead 210		38	pCi/L		98	70	130			
Lab ID: T15040055-001FMSD		Sample Matrix Spike Duplicate				Run: SUB-T62509			04/22/15 17:40	
Lead 210		39	pCi/L		100	70	130	2.0	43.7	

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U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: SW Alluvium
Work Order: C15040353

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **RA-05**										Batch: RA228-4912
Lab ID: **LCS-228-RA226-7619**		Laboratory Control Sample				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		6.6	pCi/L		99	80	120			
Lab ID: **MB-RA226-7619**	3	Method Blank				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		0.4	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: **C15040353-005GMS**		Sample Matrix Spike				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		13	pCi/L		95	70	130			
Lab ID: **C15040353-005GMSD**		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		13	pCi/L		91	70	130	3.8	54.2	

Qualifiers:

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U - Not detected at minimum detectable concentration

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ANALYTICAL SUMMARY REPORT

May 19, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15040351 Quote ID: C129 - Quarterly Long List

Project Name: Zone-1

Energy Laboratories, Inc. Casper WY received the following 11 samples for United Nuclear Corporation on 4/10/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15040351-001	614	04/07/15 13:55	04/10/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15040351-002	515-A	04/07/15 15:00	04/10/15	Aqueous	Same As Above
C15040351-003	604	04/07/15 15:52	04/10/15	Aqueous	Same As Above
C15040351-004	EPA-7	04/08/15 9:25	04/10/15	Aqueous	Same As Above
C15040351-005	EPA-5	04/08/15 10:05	04/10/15	Aqueous	Same As Above
C15040351-006	EPA-4	04/08/15 10:58	04/10/15	Aqueous	Same As Above
C15040351-007	EPA-2	04/08/15 12:05	04/10/15	Aqueous	Same As Above
C15040351-008	EPA-2 Duplicate	04/08/15 12:40	04/10/15	Aqueous	Same As Above
C15040351-009	TWQ-142	04/08/15 13:40	04/10/15	Aqueous	Same As Above
C15040351-010	Rinsate	04/08/15 14:30	04/10/15	Aqueous	Same As Above
C15040351-011	Field Blank	04/08/15 15:30	04/10/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2015.05.19 12:33:10 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-1
Work Order: C15040351

Report Date:

CASE NARRATIVE

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

TH230 ANALYSIS
USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2320 B**										Batch: R198116
Lab ID: **MBLK**	2	Method Blank				Run: MANTECH_150410B				04/10/15 15:08
Alkalinity, Total as CaCO3		1	mg/L	0.6						
Bicarbonate as HCO3		1	mg/L	1						
Lab ID: **LCS_150317**		Laboratory Control Sample				Run: MANTECH_150410B				04/10/15 15:22
Alkalinity, Total as CaCO3		260	mg/L	5.0	103	90	110			
Lab ID: **C15040351-004ADUP**	2	Sample Duplicate				Run: MANTECH_150410B				04/10/15 19:54
Alkalinity, Total as CaCO3		560	mg/L	5.0				2.1	10	
Bicarbonate as HCO3		683	mg/L	5.0				2.1	10	
Lab ID: **C15040351-005AMS**		Sample Matrix Spike				Run: MANTECH_150410B				04/10/15 20:09
Alkalinity, Total as CaCO3		295	mg/L	5.0	101	80	120			

Qualifiers:

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2540 C**										Batch: TDS150413A
Lab ID: **MB-1_150413A**		Method Blank				Run: BAL-18_150413B				04/13/15 10:08
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: **LCS-2_150413A**		Laboratory Control Sample				Run: BAL-18_150413B				04/13/15 10:09
Solids, Total Dissolved TDS @ 180 C		1150	mg/L	11	103	90	110			
Lab ID: **C15040351-001A MS**		Sample Matrix Spike				Run: BAL-18_150413B				04/13/15 10:10
Solids, Total Dissolved TDS @ 180 C		17700	mg/L	100	105	90	110			
Lab ID: **C15040351-010A DUP**		Sample Duplicate				Run: BAL-18_150413B				04/13/15 10:14
Solids, Total Dissolved TDS @ 180 C		16.0	mg/L	10.0				22	5	R

- RPD greater than method limit. Difference < PQL - RPD not applicable.

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MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150507C	
Lab ID: ICV		Initial Calibration Verification Standard							05/07/15 14:42	
Selenium-IV		0.0261	mg/L	0.0010	104	90	110			
Lab ID: CCV		Continuing Calibration Verification Standard							05/07/15 15:00	
Selenium-IV		0.0268	mg/L	0.0010	107	90	110			
Method: A3114 B									Batch: 44608	
Lab ID: MB-44608		Method Blank				Run: CVAA-C202_150507C			05/07/15 14:45	
Selenium-IV		0.0005	mg/L	0.0005						
Lab ID: LCS-44608		Laboratory Control Sample				Run: CVAA-C202_150507C			05/07/15 14:46	
Selenium-IV		0.0251	mg/L	0.0010	98	90	110			
Lab ID: C15040351-002CMS		Sample Matrix Spike				Run: CVAA-C202_150507C			05/07/15 14:51	
Selenium-IV		0.0304	mg/L	0.0010	113	85	115			
Lab ID: C15040351-002CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150507C			05/07/15 14:52	
Selenium-IV		0.0302	mg/L	0.0010	112	85	115	0.7	10	
Lab ID: C15040351-008CMS		Sample Matrix Spike				Run: CVAA-C202_150507C			05/07/15 15:06	
Selenium-IV		0.0265	mg/L	0.0010	106	85	115			
Lab ID: C15040351-008CMSD		Sample Matrix Spike Duplicate				Run: CVAA-C202_150507C			05/07/15 15:08	
Selenium-IV		0.0272	mg/L	0.0010	109	85	115	2.7	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150413A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard									04/13/15 08:23
pH		6.85	s.u.	0.010	100	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard									04/13/15 11:47
pH		6.82	s.u.	0.010	99	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard									04/13/15 14:55
pH		6.82	s.u.	0.010	99	98	102			
Method: **A4500-H B**										Batch: R198113
Lab ID: **C15040351-010ADUP**	Sample Duplicate					Run: PHSC_101-C_150413A				04/13/15 09:47
pH		6.54	s.u.	0.010				0.5	3	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150413A	
Lab ID: CCV-17		Continuing Calibration Verification Standard							04/13/15 12:50	
Nitrogen, Ammonia as N		1.01	mg/L	0.050	101	90	110			
Lab ID: CCV-32		Continuing Calibration Verification Standard							04/13/15 13:15	
Nitrogen, Ammonia as N		1.04	mg/L	0.050	104	90	110			
Lab ID: CCV-47		Continuing Calibration Verification Standard							04/13/15 13:40	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Method: A4500-NH3 G									Batch: R198142	
Lab ID: MBLK-1		Method Blank				Run: TECHNICON_150413A			04/13/15 12:23	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3		Laboratory Fortified Blank				Run: TECHNICON_150413A			04/13/15 12:26	
Nitrogen, Ammonia as N		1.93	mg/L	0.050	98	90	110			
Lab ID: C15040351-004DMS		Sample Matrix Spike				Run: TECHNICON_150413A			04/13/15 12:55	
Nitrogen, Ammonia as N		2.05	mg/L	0.050	104	90	110			
Lab ID: C15040351-004DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150413A			04/13/15 12:56	
Nitrogen, Ammonia as N		2.07	mg/L	0.050	105	90	110	1.0	10	
Lab ID: C15040353-003DMS		Sample Matrix Spike				Run: TECHNICON_150413A			04/13/15 13:20	
Nitrogen, Ammonia as N		1.91	mg/L	0.050	97	90	110			
Lab ID: C15040353-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150413A			04/13/15 13:22	
Nitrogen, Ammonia as N		1.92	mg/L	0.050	98	90	110	0.5	10	
Lab ID: C15040351-003DMS		Sample Matrix Spike				Run: TECHNICON_150413A			04/13/15 13:45	
Nitrogen, Ammonia as N		2.10	mg/L	0.050	107	90	110			
Lab ID: C15040351-003DMSD		Sample Matrix Spike Duplicate				Run: TECHNICON_150413A			04/13/15 13:47	
Nitrogen, Ammonia as N		2.08	mg/L	0.050	106	90	110	1.0	10	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H105713	
Lab ID: AS-ICV 25ppb-4/24/20		Initial Calibration Verification Standard							04/24/15 16:38	
Arsenic-III		25.1	ug/L	5.0	100	87.6	114			
Lab ID: AS-50.0-4/24/2015		Continuing Calibration Verification Standard							04/24/15 16:50	
Arsenic-III		51.5	ug/L	5.0	103	85	115			
Lab ID: AS-50.0-4/24/2015		Continuing Calibration Verification Standard							04/24/15 20:02	
Arsenic-III		47.2	ug/L	5.0	94	85	115			
Method: E1632AM									Batch: H_R105713	
Lab ID: AS-LFB 50ppb-4/24/2		Laboratory Fortified Blank				Run: SUB-H105713			04/24/15 17:14	
Arsenic-III		48.9	ug/L	5.0	98	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H105713			04/24/15 17:26	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C15040351-004E		Sample Matrix Spike				Run: SUB-H105713			04/24/15 18:38	
Arsenic-III		49.7	ug/L	5.0	100	55	146			
Lab ID: C15040351-004E		Sample Matrix Spike Duplicate				Run: SUB-H105713			04/24/15 18:50	
Arsenic-III		49.4	ug/L	5.0	99	55	146	0.6	20	
Method: E1632AM									Analytical Run: SUB-H105784	
Lab ID: AS-ICV 25ppb-4/28/20		Initial Calibration Verification Standard							04/28/15 17:59	
Arsenic-III		26.0	ug/L	5.0	104	87.6	114			
Lab ID: AS-50.0-4/28/2015		Continuing Calibration Verification Standard							04/28/15 18:11	
Arsenic-III		54.6	ug/L	5.0	109	85	115			
Method: E1632AM									Batch: H_R105784	
Lab ID: AS-LFB 50ppb-4/28/2		Laboratory Fortified Blank				Run: SUB-H105784			04/28/15 18:35	
Arsenic-III		51.7	ug/L	5.0	103	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H105784			04/28/15 18:47	
Arsenic-III		ND	ug/L	0.6						
Lab ID: H15040178-010E MS		Sample Matrix Spike				Run: SUB-H105784			04/28/15 19:11	
Arsenic-III		51.6	ug/L	5.0	103	55	146			
Lab ID: H15040178-010E MSD		Sample Matrix Spike Duplicate				Run: SUB-H105784			04/28/15 19:23	
Arsenic-III		56.2	ug/L	5.0	113	55	146	8.6	20	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150413B	
Lab ID: ICV	4	Initial Calibration Verification Standard							04/13/15 12:16	
Calcium		50.0	mg/L	1.0	100	95	105			
Magnesium		50.2	mg/L	1.0	100	95	105			
Potassium		50.6	mg/L	1.0	101	95	105			
Sodium		50.2	mg/L	1.0	100	95	105			
Lab ID: ICSA	4	Interference Check Sample A							04/13/15 12:35	
Calcium		459	mg/L	1.0	92	80	120			
Magnesium		498	mg/L	1.0	100	80	120			
Potassium		-0.0130	mg/L	1.0						
Sodium		-0.0902	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB							04/13/15 12:39	
Calcium		459	mg/L	1.0	92	80	120			
Magnesium		498	mg/L	1.0	100	80	120			
Potassium		-0.00664	mg/L	1.0						
Sodium		-0.0825	mg/L	1.0						
Method: E200.7										Batch: R198165
Lab ID: MB-150413A	4	Method Blank				Run: ICP4-C_150413B			04/13/15 12:59	
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-150413A	4	Laboratory Fortified Blank				Run: ICP4-C_150413B			04/13/15 13:03	
Calcium		47.3	mg/L	1.0	95	85	115			
Magnesium		46.8	mg/L	1.0	94	85	115			
Potassium		49.8	mg/L	1.0	100	85	115			
Sodium		48.4	mg/L	1.0	97	85	115			
Lab ID: C15040322-009BMS2	4	Sample Matrix Spike				Run: ICP4-C_150413B			04/13/15 20:18	
Calcium		812	mg/L	1.0	83	70	130			
Magnesium		816	mg/L	1.0	87	70	130			
Potassium		243	mg/L	1.0	92	70	130			
Sodium		632	mg/L	1.2	88	70	130			
Lab ID: C15040322-009BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150413B			04/13/15 20:22	
Calcium		817	mg/L	1.0	85	70	130	0.5	20	
Magnesium		820	mg/L	1.0	89	70	130	0.4	20	
Potassium		243	mg/L	1.0	92	70	130	0.0	20	
Sodium		634	mg/L	1.2	89	70	130	0.3	20	
Lab ID: C15040351-009BMS2	4	Sample Matrix Spike				Run: ICP4-C_150413B			04/13/15 21:22	
Calcium		162	mg/L	1.0	92	70	130			
Magnesium		130	mg/L	1.0	93	70	130			
Potassium		96.7	mg/L	1.0	91	70	130			

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Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Batch: R198165	
Lab ID: C15040351-009BMS2	4	Sample Matrix Spike				Run: ICP4-C_150413B			04/13/15 21:22	
Sodium		407	mg/L	1.0	87	70	130			
Lab ID: C15040351-009BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150413B			04/13/15 21:26	
Calcium		163	mg/L	1.0	93	70	130	0.5	20	
Magnesium		130	mg/L	1.0	94	70	130	0.3	20	
Potassium		96.5	mg/L	1.0	91	70	130	0.2	20	
Sodium		407	mg/L	1.0	87	70	130	0.1	20	

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Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150415B	
Lab ID: ICV	8	Initial Calibration Verification Standard							04/15/15 12:43	
Aluminum		4.97	mg/L	0.10	99	95	105			
Beryllium		0.490	mg/L	0.010	98	95	105			
Cadmium		0.478	mg/L	0.010	96	95	105			
Cobalt		0.946	mg/L	0.010	95	95	105			
Manganese		4.81	mg/L	0.010	96	95	105			
Molybdenum		0.979	mg/L	0.10	98	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Vanadium		0.969	mg/L	0.10	97	95	105			
Lab ID: ICSA	8	Interference Check Sample A							04/15/15 13:03	
Aluminum		455	mg/L	0.10	91	80	120			
Beryllium		2.00E-05	mg/L	0.010						
Cadmium		0.00361	mg/L	0.010						
Cobalt		-0.00660	mg/L	0.010						
Manganese		-0.0194	mg/L	0.010						
Molybdenum		0.00268	mg/L	0.10						
Nickel		0.00237	mg/L	0.050						
Vanadium		1.00E-05	mg/L	0.10						
Lab ID: ICSAB	8	Interference Check Sample AB							04/15/15 13:07	
Aluminum		470	mg/L	0.10	94	80	120			
Beryllium		0.458	mg/L	0.010	92	80	120			
Cadmium		0.919	mg/L	0.010	92	80	120			
Cobalt		0.414	mg/L	0.010	83	80	120			
Manganese		0.421	mg/L	0.010	84	80	120			
Molybdenum		0.00146	mg/L	0.10						
Nickel		0.840	mg/L	0.050	84	80	120			
Vanadium		0.490	mg/L	0.10	98	80	120			
Method: E200.7									Batch: 44392	
Lab ID: MB-44392	8	Method Blank				Run: ICP4-C_150415B			04/15/15 14:48	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Cadmium		ND	mg/L	0.001						
Cobalt		ND	mg/L	0.005						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						
Lab ID: LCS3-44392	8	Laboratory Control Sample				Run: ICP4-C_150415B			04/15/15 14:52	
Aluminum		2.41	mg/L	0.030	96	85	115			
Beryllium		0.237	mg/L	0.0010	95	85	115			
Cadmium		0.238	mg/L	0.0012	95	85	115			
Cobalt		0.466	mg/L	0.0052	93	85	115			

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Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 44392
Lab ID: LCS3-44392	8	Laboratory Control Sample				Run: ICP4-C_150415B				04/15/15 14:52
Manganese		2.37	mg/L	0.0012	95	85	115			
Molybdenum		0.471	mg/L	0.0053	94	85	115			
Nickel		0.472	mg/L	0.0050	94	85	115			
Vanadium		0.473	mg/L	0.010	95	85	115			
Lab ID: C15040351-006CMS3	8	Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 15:32
Aluminum		2.36	mg/L	0.075	94	70	130			
Beryllium		0.229	mg/L	0.0014	91	70	130			
Cadmium		0.225	mg/L	0.0062	90	70	130			
Cobalt		0.440	mg/L	0.026	88	70	130			
Manganese		5.08	mg/L	0.0058	90	70	130			
Molybdenum		0.464	mg/L	0.026	93	70	130			
Nickel		0.459	mg/L	0.023	92	70	130			
Vanadium		0.464	mg/L	0.017	93	70	130			
Lab ID: C15040351-006CMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 15:36
Aluminum		2.33	mg/L	0.075	93	70	130	1.2	20	
Beryllium		0.224	mg/L	0.0014	90	70	130	1.9	20	
Cadmium		0.224	mg/L	0.0062	90	70	130	0.6	20	
Cobalt		0.437	mg/L	0.026	87	70	130	0.6	20	
Manganese		5.00	mg/L	0.0058	87	70	130	1.5	20	
Molybdenum		0.462	mg/L	0.026	92	70	130	0.3	20	
Nickel		0.441	mg/L	0.023	88	70	130	4.0	20	
Vanadium		0.458	mg/L	0.017	92	70	130	1.5	20	
Lab ID: C15040354-001AMS3	8	Sample Matrix Spike				Run: ICP4-C_150415B				04/15/15 16:43
Aluminum		2.46	mg/L	0.075	98	70	130			
Beryllium		0.248	mg/L	0.0014	99	70	130			
Cadmium		0.243	mg/L	0.0062	97	70	130			
Cobalt		0.469	mg/L	0.026	94	70	130			
Manganese		3.72	mg/L	0.0058	98	70	130			
Molybdenum		0.482	mg/L	0.026	96	70	130			
Nickel		0.479	mg/L	0.023	96	70	130			
Vanadium		0.496	mg/L	0.017	99	70	130			
Lab ID: C15040354-001AMSD	8	Sample Matrix Spike Duplicate				Run: ICP4-C_150415B				04/15/15 16:47
Aluminum		2.48	mg/L	0.075	99	70	130	0.8	20	
Beryllium		0.250	mg/L	0.0014	100	70	130	1.1	20	
Cadmium		0.247	mg/L	0.0062	99	70	130	1.6	20	
Cobalt		0.482	mg/L	0.026	96	70	130	2.8	20	
Manganese		3.77	mg/L	0.0058	100	70	130	1.4	20	
Molybdenum		0.504	mg/L	0.026	101	70	130	4.3	20	
Nickel		0.483	mg/L	0.023	97	70	130	0.9	20	
Vanadium		0.506	mg/L	0.017	101	70	130	2.1	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150416A	
Lab ID: ICV	6	Initial Calibration Verification Standard							04/16/15 10:30	
Aluminum		0.0503	mg/L	0.0010	101	90	110			
Beryllium		0.0500	mg/L	0.0010	100	90	110			
Cadmium		0.0496	mg/L	0.0010	99	90	110			
Cobalt		0.0512	mg/L	0.0010	102	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Uranium		0.0488	mg/L	0.00030	98	90	110			
Method: E200.8									Batch: 44392	
Lab ID: MB-44392	6	Method Blank				Run: ICPMS2-C_150416A			04/16/15 16:16	
Aluminum		0.0007	mg/L	0.0005						
Beryllium		ND	mg/L	4E-05						
Cadmium		ND	mg/L	2E-05						
Cobalt		ND	mg/L	1E-05						
Lead		4E-05	mg/L	3E-05						
Uranium		9E-05	mg/L	9E-06						
Lab ID: LCS3-44392	6	Laboratory Control Sample				Run: ICPMS2-C_150416A			04/16/15 16:28	
Aluminum		2.21	mg/L	0.030	88	85	115			
Beryllium		0.228	mg/L	0.0010	91	85	115			
Cadmium		0.231	mg/L	0.0010	93	85	115			
Cobalt		0.442	mg/L	0.0050	88	85	115			
Lead		0.475	mg/L	0.0010	95	85	115			
Uranium		0.482	mg/L	0.00030	96	85	115			
Lab ID: C15040351-006CMS3	6	Sample Matrix Spike				Run: ICPMS2-C_150416A			04/16/15 17:16	
Aluminum		2.03	mg/L	0.030	81	70	130			
Beryllium		0.204	mg/L	0.0010	82	70	130			
Cadmium		0.215	mg/L	0.0010	86	70	130			
Cobalt		0.421	mg/L	0.0050	84	70	130			
Lead		0.480	mg/L	0.0010	96	70	130			
Uranium		0.506	mg/L	0.00030	101	70	130			
Lab ID: C15040351-006CMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150416A			04/16/15 17:19	
Aluminum		2.00	mg/L	0.030	80	70	130	1.7	20	
Beryllium		0.200	mg/L	0.0010	80	70	130	2.0	20	
Cadmium		0.210	mg/L	0.0010	84	70	130	2.4	20	
Cobalt		0.415	mg/L	0.0050	83	70	130	1.3	20	
Lead		0.473	mg/L	0.0010	95	70	130	1.3	20	
Uranium		0.500	mg/L	0.00030	100	70	130	1.1	20	
Lab ID: C15040354-001AMS3	6	Sample Matrix Spike				Run: ICPMS2-C_150416A			04/16/15 17:53	
Aluminum		2.07	mg/L	0.030	83	70	130			
Beryllium		0.225	mg/L	0.0010	90	70	130			
Cadmium		0.230	mg/L	0.0010	92	70	130			
Cobalt		0.426	mg/L	0.0050	85	70	130			
Lead		0.479	mg/L	0.0010	96	70	130			

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 44392
Lab ID: C15040354-001AMS3	6	Sample Matrix Spike				Run: ICPMS2-C_150416A				04/16/15 17:53
Uranium		0.504	mg/L	0.00030	100	70	130			
Lab ID: C15040354-001AMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150416A				04/16/15 17:55
Aluminum		2.02	mg/L	0.030	81	70	130	2.3	20	
Beryllium		0.222	mg/L	0.0010	89	70	130	1.3	20	
Cadmium		0.221	mg/L	0.0010	88	70	130	4.0	20	
Cobalt		0.422	mg/L	0.0050	84	70	130	0.8	20	
Lead		0.472	mg/L	0.0010	94	70	130	1.5	20	
Uranium		0.492	mg/L	0.00030	97	70	130	2.3	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150414A	
Lab ID: ICV	Initial Calibration Verification Standard								04/13/15 09:27	
Chloride		10.0	mg/L	1.0	100	90	110			
Lab ID: CCV-041315-1	Continuing Calibration Verification Standard								04/13/15 10:19	
Chloride		9.86	mg/L	1.0	99	90	110			
Lab ID: CCV-041315-2	Continuing Calibration Verification Standard								04/13/15 14:06	
Chloride		9.91	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R198172	
Lab ID: ICB	Method Blank					Run: IC1-C_150414A			04/13/15 09:44	
Chloride		ND	mg/L	0.04						
Lab ID: LFB-041315-1	Laboratory Fortified Blank					Run: IC1-C_150414A			04/13/15 10:02	
Chloride		10.4	mg/L	1.0	104	90	110			
Lab ID: C15040361-001AMS	Sample Matrix Spike					Run: IC1-C_150414A			04/13/15 10:54	
Chloride		36.9	mg/L	1.0	98	90	110			
Lab ID: C15040361-001AMSD	Sample Matrix Spike Duplicate					Run: IC1-C_150414A			04/13/15 11:11	
Chloride		36.8	mg/L	1.0	97	90	110	0.2	20	
Lab ID: C15040351-009AMS	Sample Matrix Spike					Run: IC1-C_150414A			04/13/15 14:58	
Chloride		69.9	mg/L	1.0	105	90	110			
Lab ID: C15040351-009AMSD	Sample Matrix Spike Duplicate					Run: IC1-C_150414A			04/13/15 15:15	
Chloride		70.6	mg/L	1.0	107	90	110	0.9	20	
Method: E300.0									Analytical Run: IC1-C_150423A	
Lab ID: ICV	Initial Calibration Verification Standard								04/23/15 10:41	
Sulfate		39.8	mg/L	1.0	99	90	110			
Method: E300.0									Batch: R198594	
Lab ID: ICB	Method Blank					Run: IC1-C_150423A			04/23/15 10:59	
Sulfate		0.1	mg/L	0.1						
Lab ID: LFB-042315-1	Laboratory Fortified Blank					Run: IC1-C_150423A			04/23/15 11:34	
Sulfate		39.0	mg/L	1.0	97	90	110			
Lab ID: LFBD-042315-1	Laboratory Fortified Blank Duplicate					Run: IC1-C_150423A			04/23/15 11:51	
Sulfate		40.0	mg/L	1.0	100	90	110	2.5	20	
Lab ID: C15040115-001AMS	Sample Matrix Spike					Run: IC1-C_150423A			04/23/15 12:43	
Sulfate		39600	mg/L	420	99	90	110			
Lab ID: C15040115-001AMSD	Sample Matrix Spike Duplicate					Run: IC1-C_150423A			04/23/15 13:01	
Sulfate		39600	mg/L	420	99	90	110	0.0	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC2-C_150414A	
Lab ID: ICV	Initial Calibration Verification Standard								04/14/15 16:59	
Sulfate		40.3	mg/L	1.0	101	90	110			
Lab ID: CCV-041515-1	Continuing Calibration Verification Standard								04/14/15 17:54	
Sulfate		40.2	mg/L	1.0	101	90	110			
Lab ID: CCV-041515-2	Continuing Calibration Verification Standard								04/14/15 22:15	
Sulfate		40.4	mg/L	1.0	101	90	110			
Method: E300.0									Batch: R198301	
Lab ID: ICB	Method Blank					Run: IC2-C_150414A			04/14/15 17:17	
Sulfate		0.1	mg/L	0.03						
Lab ID: LFB-041515-1	Laboratory Fortified Blank					Run: IC2-C_150414A			04/14/15 17:35	
Sulfate		40.8	mg/L	1.0	102	90	110			
Lab ID: C15040351-003AMS	Sample Matrix Spike					Run: IC2-C_150414A			04/14/15 23:10	
Sulfate		5740	mg/L	8.3		90	110			A
Lab ID: C15040351-003AMSD	Sample Matrix Spike Duplicate					Run: IC2-C_150414A			04/14/15 23:28	
Sulfate		5740	mg/L	8.3		90	110	0.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150414A	
Lab ID: CCV-17	Continuing Calibration Verification Standard								04/14/15 12:52	
Nitrogen, Nitrate+Nitrite as N		1.01	mg/L	0.10	101	90	110			
Method: E353.2									Batch: R198200	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150414A			04/14/15 12:12	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150414A			04/14/15 12:17	
Nitrogen, Nitrate+Nitrite as N		1.94	mg/L	0.10	99	90	110			
Lab ID: C15040351-002DMS	Sample Matrix Spike					Run: TECHNICON_150414A			04/14/15 13:00	
Nitrogen, Nitrate+Nitrite as N		89.6	mg/L	2.5	106	90	110			
Lab ID: C15040351-002DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150414A			04/14/15 13:02	
Nitrogen, Nitrate+Nitrite as N		89.3	mg/L	2.5	105	90	110	0.3	10	
Lab ID: C15040353-001DMS	Sample Matrix Spike					Run: TECHNICON_150414A			04/14/15 13:35	
Nitrogen, Nitrate+Nitrite as N		175	mg/L	5.0	106	90	110			
Lab ID: C15040353-001DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150414A			04/14/15 13:37	
Nitrogen, Nitrate+Nitrite as N		177	mg/L	5.0	108	90	110	1.1	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R198169	
Lab ID: 13-Apr-15_CCV_6	9	Continuing Calibration Verification Standard							04/13/15 15:11	
Bromodichloromethane		11.8	ug/L	1.0	118	70	130			
Bromoform		10.5	ug/L	1.0	105	70	130			
Chlorodibromomethane		9.92	ug/L	1.0	99	70	130			
Chloroform		11.8	ug/L	1.0	118	70	130			
Trihalomethanes, Total		44.0	ug/L	1.0	110	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	106	70	130			
Surr: Dibromofluoromethane				1.0	108	70	130			
Surr: p-Bromofluorobenzene				1.0	108	70	130			
Surr: Toluene-d8				1.0	108	70	130			
Method: E624									Batch: R198169	
Lab ID: 13-Apr-15_LCS_3	9	Laboratory Control Sample				Run: 5975VOC1_150413A			04/13/15 12:43	
Bromodichloromethane		11.6	ug/L	1.0	116	60	130			
Bromoform		10.7	ug/L	1.0	107	60	142			
Chlorodibromomethane		10.4	ug/L	1.0	104	67	134			
Chloroform		10.0	ug/L	1.0	100	56	135			
Trihalomethanes, Total		42.7	ug/L	1.0	107	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	96	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Lab ID: 13-Apr-15_MBLK_5	9	Method Blank				Run: 5975VOC1_150413A			04/13/15 13:53	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	109	73.7	126			
Surr: Dibromofluoromethane				1.0	130	64.4	131			
Surr: p-Bromofluorobenzene				1.0	111	67.1	133			
Surr: Toluene-d8				1.0	101	79.7	125			
Lab ID: C15040353-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150413A			04/13/15 21:20	
Bromodichloromethane		124	ug/L	5.0	124	60	130			
Bromoform		104	ug/L	5.0	104	60	142			
Chlorodibromomethane		110	ug/L	5.0	110	67	134			
Chloroform		122	ug/L	5.0	121	56	135			
Trihalomethanes, Total		460	ug/L	5.0	115	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	115	43	142			
Surr: p-Bromofluorobenzene				1.0	106	70	130			
Surr: Toluene-d8				1.0	106	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R198169
Lab ID: C15040353-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150413A			04/13/15 21:55	
Bromodichloromethane		123	ug/L	5.0	123	60	130	1.0	20	
Bromoform		106	ug/L	5.0	106	60	142	1.9	20	
Chlorodibromomethane		109	ug/L	5.0	109	67	134	0.4	20	
Chloroform		120	ug/L	5.0	118	56	135	2.0	20	
Trihalomethanes, Total		458	ug/L	5.0	114	70	130	0.4	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	112	43	142			
Surr: p-Bromofluorobenzene				1.0	105	70	130			
Surr: Toluene-d8				1.0	105	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R198171	
Lab ID: 041315_CCV_2	9	Continuing Calibration Verification Standard							04/13/15 15:32	
Bromodichloromethane		12.4	ug/L	1.0	124	70	130			
Bromoform		12.4	ug/L	1.0	124	70	130			
Chlorodibromomethane		11.9	ug/L	1.0	119	70	130			
Chloroform		12.2	ug/L	1.0	122	70	130			
Trihalomethanes, Total		49.0	ug/L	1.0	123	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	117	70	130			
Surr: Dibromofluoromethane				1.0	116	70	130			
Surr: p-Bromofluorobenzene				1.0	109	70	130			
Surr: Toluene-d8				1.0	103	70	130			
Lab ID: 041315_CCV_20	9	Continuing Calibration Verification Standard							04/14/15 02:02	
Bromodichloromethane		12.7	ug/L	1.0	127	70	130			
Bromoform		11.6	ug/L	1.0	116	70	130			
Chlorodibromomethane		12.2	ug/L	1.0	122	70	130			
Chloroform		12.3	ug/L	1.0	123	70	130			
Trihalomethanes, Total		48.9	ug/L	1.0	122	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	114	70	130			
Surr: Dibromofluoromethane				1.0	112	70	130			
Surr: p-Bromofluorobenzene				1.0	111	70	130			
Surr: Toluene-d8				1.0	112	70	130			
Method: E624									Batch: R198171	
Lab ID: 041315_LCS_3	9	Laboratory Control Sample				Run: SATURNCA_150413A			04/13/15 16:07	
Bromodichloromethane		12.6	ug/L	1.0	126	60	130			
Bromoform		12.4	ug/L	1.0	124	60	142			
Chlorodibromomethane		13.2	ug/L	1.0	132	67	134			
Chloroform		11.8	ug/L	1.0	118	56	135			
Trihalomethanes, Total		50.0	ug/L	1.0	125	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	116	43	142			
Surr: p-Bromofluorobenzene				1.0	112	70	130			
Surr: Toluene-d8				1.0	107	70	130			
Lab ID: 041315_MBLK_5	9	Method Blank				Run: SATURNCA_150413A			04/13/15 17:17	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	111	73.7	126			
Surr: Dibromofluoromethane				1.0	112	64.4	131			
Surr: p-Bromofluorobenzene				1.0	102	67.1	133			
Surr: Toluene-d8				1.0	104	79.7	125			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R198171
Lab ID: C15040351-001HMS	9	Sample Matrix Spike				Run: SATURNCA_150413A			04/14/15 00:17	
Bromodichloromethane		129	ug/L	5.0	129	60	130			
Bromoform		124	ug/L	5.0	124	60	142			
Chlorodibromomethane		123	ug/L	5.0	123	67	134			
Chloroform		222	ug/L	5.0	119	56	135			
Trihalomethanes, Total		598	ug/L	5.0	124	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	115	70	130			
Surr: Dibromofluoromethane				1.0	105	43	142			
Surr: p-Bromofluorobenzene				1.0	116	70	130			
Surr: Toluene-d8				1.0	112	70	130			
Lab ID: C15040351-001HMSD	9	Sample Matrix Spike Duplicate				Run: SATURNCA_150413A			04/14/15 00:52	
Bromodichloromethane		132	ug/L	5.0	132	60	130	2.1	20	S
Bromoform		116	ug/L	5.0	116	60	142	6.3	20	
Chlorodibromomethane		121	ug/L	5.0	121	67	134	1.6	20	
Chloroform		220	ug/L	5.0	117	56	135	0.9	20	
Trihalomethanes, Total		589	ug/L	5.0	122	70	130	1.5	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	112	70	130			
Surr: Dibromofluoromethane				1.0	106	43	142			
Surr: p-Bromofluorobenzene				1.0	110	70	130			
Surr: Toluene-d8				1.0	111	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.1										Batch: GA-0874
Lab ID: MB-GA-0874	3	Method Blank				Run: G5000W_150415B				04/15/15 21:15
Gross Alpha minus Rn & U		0.6	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: LCS-GA-0874		Laboratory Control Sample				Run: G5000W_150415B				04/15/15 21:15
Gross Alpha minus Rn & U		30.1	pCi/L		86	80	120			
Lab ID: C15040351-004GMS		Sample Matrix Spike				Run: G5000W_150415B				04/15/15 21:15
Gross Alpha minus Rn & U		72.0	pCi/L		97	70	130			
Lab ID: C15040351-004GMSD		Sample Matrix Spike Duplicate				Run: G5000W_150415B				04/15/15 21:15
Gross Alpha minus Rn & U		76.9	pCi/L		104	70	130	6.6	52.5	
Method: E900.1										Batch: GA-0878
Lab ID: LCS-GA-0878		Laboratory Control Sample				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		37.3	pCi/L		108	80	120			
Lab ID: MB-GA-0878	3	Method Blank				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		0.4	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		1	pCi/L							
Gross Alpha minus Rn & U MDC		2	pCi/L							
Lab ID: C15040351-007GDUP	3	Sample Duplicate				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		2.35	pCi/L					19	153.3	
Gross Alpha minus Rn & U Precision (±)		1.45	pCi/L							
Gross Alpha minus Rn & U MDC		1.80	pCi/L							
Lab ID: C15040351-008GDUP	3	Sample Duplicate				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		1.92	pCi/L					8.2	164.7	
Gross Alpha minus Rn & U Precision (±)		1.55	pCi/L							
Gross Alpha minus Rn & U MDC		1.80	pCi/L							
Lab ID: C15040807-001CMS		Sample Matrix Spike				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		65.7	pCi/L		77	70	130			
Lab ID: C15040807-001CMSD		Sample Matrix Spike Duplicate				Run: G542M_150429A				04/29/15 21:16
Gross Alpha minus Rn & U		62.8	pCi/L		69	70	130	4.5	50.5	S

- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS/MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7619
Lab ID: C15040351-003GMS		Sample Matrix Spike				Run: G5000W_150414B				04/22/15 14:11
Radium 226		20	pCi/L		87	70	130			
Lab ID: C15040351-003GMSD		Sample Matrix Spike Duplicate				Run: G5000W_150414B				04/22/15 14:11
Radium 226		19	pCi/L		82	70	130	5.2	49.2	
Lab ID: MB-RA226-7619	3	Method Blank				Run: G5000W_150414B				04/22/15 15:45
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Lab ID: LCS-RA226-7619		Laboratory Control Sample				Run: G5000W_150414B				04/22/15 15:45
Radium 226		9.2	pCi/L		88	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Project: Zone-1

Report Date: 05/19/15
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2219
Lab ID: LCS-RA-TH-ISO-2219		Laboratory Control Sample				Run: ALPHANALYST_150415A				04/17/15 10:24
Thorium 230		6.2	pCi/L		92	80	120			
Lab ID: C15040351-011GMS		Sample Matrix Spike				Run: ALPHANALYST_150415A				04/17/15 16:12
Thorium 230		13.1	pCi/L		99	70	130			
Lab ID: C15040351-011GMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150415A				04/17/15 16:12
Thorium 230		13.0	pCi/L		97	70	130	1.3	48	
Lab ID: MB-RA-TH-ISO-2219	3	Method Blank				Run: ALPHANALYST_150415A				04/17/15 16:12
Thorium 230		0.2	pCi/L							U
Thorium 230 precision (±)		0.2	pCi/L							
Thorium 230 MDC		0.3	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2224
Lab ID: LCS-RA-TH-ISO-2224		Laboratory Control Sample				Run: ALPHANALYST_150427A				04/29/15 17:13
Thorium 230		6.1	pCi/L		88	80	120			
Lab ID: C15040593-001AMS		Sample Matrix Spike				Run: ALPHANALYST_150427A				04/29/15 17:13
Thorium 230		14.4	pCi/L		110	70	130			
Lab ID: C15040593-001AMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150427A				04/29/15 17:13
Thorium 230		12.5	pCi/L		96	70	130	14	48	
Lab ID: MB-RA-TH-ISO-2224	3	Method Blank				Run: ALPHANALYST_150427A				04/30/15 09:44
Thorium 230		0.3	pCi/L							
Thorium 230 precision (±)		0.2	pCi/L							
Thorium 230 MDC		0.3	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E909.0**									Batch: T_PB-210-0546	
Lab ID: **MB-PB-210-0546**	3	Method Blank			Run: SUB-T62510				04/24/15 05:37	
Lead 210		-0.2	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: **LCS-PB-210-0546**		Laboratory Control Sample			Run: SUB-T62510				04/24/15 07:20	
Lead 210		21	pCi/L		101	80	120			
Lab ID: **T15040057-001FMS**		Sample Matrix Spike			Run: SUB-T62510				04/24/15 10:14	
Lead 210		33	pCi/L		86	70	130			
Lab ID: ***T15040057-001FMSD***		Sample Matrix Spike Duplicate			Run: SUB-T62510				04/24/15 11:34	
Lead 210		35	pCi/L		92	70	130	7.0	43.8	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: United Nuclear Corporation
Report Date: 05/19/15
Project: Zone-1
Work Order: C15040351

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05										Batch: RA228-4912
Lab ID: LCS-228-RA226-7619		Laboratory Control Sample				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		6.6	pCi/L		99	80	120			
Lab ID: MB-RA226-7619	3	Method Blank				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		0.4	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: C15040353-005GMS		Sample Matrix Spike				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		13	pCi/L		95	70	130			
Lab ID: C15040353-005GMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150414A				04/17/15 09:49
Radium 228		13	pCi/L		91	70	130	3.8	54.2	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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ANALYTICAL SUMMARY REPORT

June 04, 2015

United Nuclear Corporation
21 Miles NE of Gallup
Gallup, NM 87305

Work Order: C15040563 Quote ID: C129 - Quarterly Long List

Project Name: Zone-3

Energy Laboratories, Inc. Casper WY received the following 23 samples for United Nuclear Corporation on 4/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15040563-001	613	04/13/15 8:40	04/17/15	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Arsenic Speciation, Total Selenium-IV, Total CVAA Selenium Prep E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Metals Preparation by EPA 200.2 Gross Alpha minus Rn222 and Uranium Lead 210, Total Radium 226, Total Radium 228, Total Thorium, Isotopic Solids, Total Dissolved Solids, Total Dissolved - Calculated E624 Purgeable Organics
C15040563-002	517	04/13/15 9:30	04/17/15	Aqueous	Same As Above
C15040563-003	708	04/13/15 10:55	04/17/15	Aqueous	Same As Above
C15040563-004	711	04/13/15 12:40	04/17/15	Aqueous	Same As Above
C15040563-005	EPA-13	04/13/15 13:10	04/17/15	Aqueous	Same As Above
C15040563-006	719	04/13/15 14:05	04/17/15	Aqueous	Same As Above
C15040563-007	420	04/13/15 15:45	04/17/15	Aqueous	Same As Above
C15040563-008	EPA-14	04/14/15 9:35	04/17/15	Aqueous	Same As Above
C15040563-009	717	04/14/15 11:40	04/17/15	Aqueous	Same As Above
C15040563-010	717 Duplicate	04/14/15 12:15	04/17/15	Aqueous	Same As Above
C15040563-011	MW-7	04/14/15 13:10	04/17/15	Aqueous	Same As Above
C15040563-012	Rinsate	04/14/15 17:55	04/17/15	Aqueous	Same As Above
C15040563-013	Field Blank	04/14/15 18:00	04/17/15	Aqueous	Same As Above
C15040563-014	NBL-2	04/14/15 12:50	04/17/15	Aqueous	Alkalinity E300.0 Anions pH Solids, Total Dissolved

ANALYTICAL SUMMARY REPORT

C15040563-015	PB-3	04/14/15 14:45 04/17/15	Aqueous	Same As Above
C15040563-016	PB-4	04/14/15 16:25 04/17/15	Aqueous	Same As Above
C15040563-017	MW-6	04/14/15 17:35 04/17/15	Aqueous	Same As Above
C15040563-018	NW-1	04/14/15 12:00 04/17/15	Aqueous	Same As Above
C15040563-019	NW-4	04/14/15 12:15 04/17/15	Aqueous	Same As Above
C15040563-020	NW-2	04/14/15 12:36 04/17/15	Aqueous	Same As Above
C15040563-021	NW-3	04/14/15 12:53 04/17/15	Aqueous	Same As Above
C15040563-022	NW-5	04/14/15 13:07 04/17/15	Aqueous	Same As Above
C15040563-023	RW-A	04/14/15 13:26 04/17/15	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Stephanie D Waldrop
Reporting Supervisor

Digitally signed by
Stephanie Waldrop
Date: 2015.06.04 10:27:55 -06:00

CLIENT: United Nuclear Corporation
Project: Zone-3
Work Order: C15040563

Revised Date: 06/04/15
Report Date: 05/20/15

CASE NARRATIVE

REVISED/SUPPLEMENTAL REPORT
The attached analytical report has been revised from a previously submitted report due to the correction of the Work Order Receipt Checklist. The report has been revised and replaces any previously issued report in its entirety.

HOLDING TIME COMMENTS
The Bicarbonate analysis on sample 613 and the Total Dissolved Solids analysis on samples 613 and 517 are past the recommended holding time. The Bicarbonate hold time was missed due to an error in our logging system. The TDS hold time was missed due to only 3 days hold time remaining when the samples were received. The laboratory apologizes for any incovenience this may cause.

BRANCH LABORATORY SUBCONTRACT ANALYSIS
Tests associated with analyst identified as ELI-H were subcontracted to Energy Laboratories, 3161 E.Lyndale Ave., Helena, MT, EPA Number MT00945.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

ALPHA-U ANALYSIS
After evaluating our analytic methods based on industry and EPA standards we have identified areas in the method for gross radium alpha minus uranium that do not meet EPA method requirements. In order to meet these requirements we have made a change to our analytic method that may result in an increase of the sample result and MDC. The changes may produce higher counts where radium 224 is present and may result in higher recoveries than historically observed.

TH230 ANALYSIS
USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis.

PB210 ANALYSIS
USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample was not achieved.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: R198404
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150420A			04/20/15 15:01	
Alkalinity, Total as CaCO3		1	mg/L	0.6						
Bicarbonate as HCO3		2	mg/L	1						
Lab ID: LCS_150317		Laboratory Control Sample				Run: MANTECH_150420A			04/20/15 15:14	
Alkalinity, Total as CaCO3		256	mg/L	5.0	102	90	110			
Lab ID: C15040563-006ADUP	2	Sample Duplicate				Run: MANTECH_150420A			04/20/15 16:43	
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Lab ID: C15040563-016ADUP	2	Sample Duplicate				Run: MANTECH_150420A			04/20/15 18:06	
Alkalinity, Total as CaCO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		ND	mg/L	5.0					10	
Lab ID: C15040563-017AMS		Sample Matrix Spike				Run: MANTECH_150420A			04/20/15 18:23	
Alkalinity, Total as CaCO3		404	mg/L	5.0	101	80	120			
Method: A2320 B										Batch: R198719
Lab ID: MBLK	2	Method Blank				Run: MANTECH_150428B			04/28/15 15:26	
Alkalinity, Total as CaCO3		0.8	mg/L	0.6						
Bicarbonate as HCO3		ND	mg/L	1						
Lab ID: LCS_150317		Laboratory Control Sample				Run: MANTECH_150428B			04/28/15 15:39	
Alkalinity, Total as CaCO3		249	mg/L	5.0	99	90	110			
Lab ID: C15040714-003ADUP	2	Sample Duplicate				Run: MANTECH_150428B			04/28/15 16:07	
Alkalinity, Total as CaCO3		254	mg/L	5.0				12	10	R
Bicarbonate as HCO3		310	mg/L	5.0				12	10	R
Lab ID: C15040714-004AMS		Sample Matrix Spike				Run: MANTECH_150428B			04/28/15 16:23	
Alkalinity, Total as CaCO3		684	mg/L	5.0	98	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS150420A	
Lab ID: MB-1_150420A		Method Blank				Run: BAL-18_150420B			04/20/15 09:43	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	9						
Lab ID: LCS-2_150420A		Laboratory Control Sample				Run: BAL-18_150420B			04/20/15 09:43	
Solids, Total Dissolved TDS @ 180 C		1140	mg/L	11	103	90	110			
Lab ID: C15040563-002A DUP		Sample Duplicate				Run: BAL-18_150420B			04/20/15 09:44	
Solids, Total Dissolved TDS @ 180 C		5830	mg/L	39				0.8	5	
Lab ID: C15040563-003A MS		Sample Matrix Spike				Run: BAL-18_150420B			04/20/15 09:45	
Solids, Total Dissolved TDS @ 180 C		10400	mg/L	40	98	90	110			
Lab ID: C15040563-012A DUP		Sample Duplicate				Run: BAL-18_150420B			04/20/15 09:50	
Solids, Total Dissolved TDS @ 180 C		51.5	mg/L	9.7				3.6	5	
Lab ID: C15040563-022A DUP		Sample Duplicate				Run: BAL-18_150420B			04/20/15 09:58	
Solids, Total Dissolved TDS @ 180 C		5130	mg/L	20				0.7	5	
Lab ID: C15040563-023A MS		Sample Matrix Spike				Run: BAL-18_150420B			04/20/15 09:59	
Solids, Total Dissolved TDS @ 180 C		6990	mg/L	20	102	90	110			
Method: A2540 C									Batch: TDS150424A	
Lab ID: MB-1_150424A		Method Blank				Run: BAL-18_150424A			04/24/15 10:30	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	9						
Lab ID: LCS-2_150424A		Laboratory Control Sample				Run: BAL-18_150424A			04/24/15 10:31	
Solids, Total Dissolved TDS @ 180 C		1140	mg/L	11	102	90	110			
Lab ID: C15040563-001A DUP		Sample Duplicate				Run: BAL-18_150424A			04/24/15 10:31	
Solids, Total Dissolved TDS @ 180 C		11500	mg/L	98				1.2	5	
Lab ID: C15040633-001A MS		Sample Matrix Spike				Run: BAL-18_150424A			04/24/15 10:33	
Solids, Total Dissolved TDS @ 180 C		1810	mg/L	11	101	90	110			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B									Analytical Run: CVAA-C202_150515A	
Lab ID: ICV	Initial Calibration Verification Standard								05/15/15 10:49	
Selenium-IV		0.0267	mg/L	0.0010	107	90	110			
Lab ID: CCV	Continuing Calibration Verification Standard								05/15/15 11:08	
Selenium-IV		0.0264	mg/L	0.0010	106	90	110			
Method: A3114 B									Batch: 44690	
Lab ID: MB-44690	Method Blank					Run: CVAA-C202_150515A			05/15/15 10:52	
Selenium-IV		ND	mg/L	0.0005						
Lab ID: LCS-44690	Laboratory Control Sample					Run: CVAA-C202_150515A			05/15/15 10:53	
Selenium-IV		0.0255	mg/L	0.0010	102	90	110			
Lab ID: C15040563-001CMS	Sample Matrix Spike					Run: CVAA-C202_150515A			05/15/15 10:57	
Selenium-IV		0.0243	mg/L	0.0010	97	85	115			
Lab ID: C15040563-001CMSD	Sample Matrix Spike Duplicate					Run: CVAA-C202_150515A			05/15/15 10:58	
Selenium-IV		0.0241	mg/L	0.0010	96	85	115	1.0	10	
Lab ID: C15040563-012CMS	Sample Matrix Spike					Run: CVAA-C202_150515A			05/15/15 11:20	
Selenium-IV		0.0265	mg/L	0.0010	106	85	115			
Lab ID: C15040563-012CMSD	Sample Matrix Spike Duplicate					Run: CVAA-C202_150515A			05/15/15 11:21	
Selenium-IV		0.0271	mg/L	0.0010	108	85	115	2.3	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150420A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/20/15 08:39	
pH		6.81	s.u.	0.010	99	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/20/15 12:51	
pH		7.0	s.u.	0.010	100	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/20/15 13:30	
pH		6.84	s.u.	0.010	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								04/20/15 15:14	
pH		6.98	s.u.	0.010	100	98	102			
Method: **A4500-H B**									Batch: R198364	
Lab ID: **C15040563-012ADUP**	Sample Duplicate					Run: PHSC_101-C_150420A			04/20/15 14:30	
pH		7.85	s.u.	0.010				0.1	3	
Lab ID: **C15040563-022ADUP**	Sample Duplicate					Run: PHSC_101-C_150420A			04/20/15 15:31	
pH		6.54	s.u.	0.010				0.8	3	
Lab ID: **C15040563-002ADUP**	Sample Duplicate					Run: PHSC_101-C_150420A			04/20/15 15:45	
pH		2.76	s.u.	0.010				1.4	3	
Method: **A4500-H B**									Analytical Run: PHSC_101-C_150424A	
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/24/15 08:31	
pH		6.82	s.u.	0.010	99	98	102			
Lab ID: **pH 6.86**	Initial Calibration Verification Standard								04/24/15 12:55	
pH		6.80	s.u.	0.010	99	98	102			
Method: **A4500-H B**									Batch: R198563	
Lab ID: **C15040563-001ADUP**	Sample Duplicate					Run: PHSC_101-C_150424A			04/24/15 09:30	
pH		2.97	s.u.	0.010				0.0	3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G									Analytical Run: TECHNICON_150421A	
Lab ID: CCV-32	Continuing Calibration Verification Standard								04/21/15 12:30	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Lab ID: CCV-47	Continuing Calibration Verification Standard								04/21/15 12:55	
Nitrogen, Ammonia as N		1.02	mg/L	0.050	102	90	110			
Lab ID: CCV-62	Continuing Calibration Verification Standard								04/21/15 13:20	
Nitrogen, Ammonia as N		1.03	mg/L	0.050	103	90	110			
Method: A4500-NH3 G									Batch: R198443	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150421A			04/21/15 11:38	
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150421A			04/21/15 11:42	
Nitrogen, Ammonia as N		1.87	mg/L	0.050	95	90	110			
Lab ID: C15040545-001EMS	Sample Matrix Spike					Run: TECHNICON_150421A			04/21/15 12:35	
Nitrogen, Ammonia as N		2.97	mg/L	0.050	97	90	110			
Lab ID: C15040545-001EMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150421A			04/21/15 12:37	
Nitrogen, Ammonia as N		2.99	mg/L	0.050	98	90	110	0.7	10	
Lab ID: C15040563-006DMS	Sample Matrix Spike					Run: TECHNICON_150421A			04/21/15 13:00	
Nitrogen, Ammonia as N		2.41	mg/L	0.050	105	90	110			
Lab ID: C15040563-006DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150421A			04/21/15 13:02	
Nitrogen, Ammonia as N		2.43	mg/L	0.050	106	90	110	0.8	10	
Lab ID: C15040563-002DMS	Sample Matrix Spike					Run: TECHNICON_150421A			04/21/15 13:25	
Nitrogen, Ammonia as N		18.6	mg/L	0.25	107	90	110			
Lab ID: C15040563-002DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150421A			04/21/15 13:27	
Nitrogen, Ammonia as N		18.7	mg/L	0.25	108	90	110	0.5	10	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E1632AM									Analytical Run: SUB-H105784	
Lab ID: AS-ICV 25ppb-4/28/20	2	Initial Calibration Verification Standard							04/28/15 17:59	
Arsenic-III		26.0	ug/L	5.0	104	87.6	114			
Arsenic-V		26.7	ug/L	5.0	107	87	116			
Lab ID: AS-50.0-4/28/2015	2	Continuing Calibration Verification Standard							04/28/15 18:11	
Arsenic-III		54.6	ug/L	5.0	109	85	115			
Arsenic-V		50.9	ug/L	5.0	102	85	115			
Method: E1632AM									Batch: H_R105784	
Lab ID: AS-LFB 50ppb-4/28/2	2	Laboratory Fortified Blank				Run: SUB-H105784			04/28/15 18:35	
Arsenic-III		51.7	ug/L	5.0	103	55	146			
Arsenic-V		50.8	ug/L	5.0	102	55	146			
Lab ID: ICB	2	Method Blank				Run: SUB-H105784			04/28/15 18:47	
Arsenic-III		ND	ug/L	0.6						
Arsenic-V		ND	ug/L	0.8						
Lab ID: H15040178-010E MS	2	Sample Matrix Spike				Run: SUB-H105784			04/28/15 19:11	
Arsenic-III		51.6	ug/L	5.0	103	55	146			
Arsenic-V		52.3	ug/L	5.0	105	55	146			
Lab ID: H15040178-010E MSD	2	Sample Matrix Spike Duplicate				Run: SUB-H105784			04/28/15 19:23	
Arsenic-III		56.2	ug/L	5.0	113	55	146	8.6	20	
Arsenic-V		57.4	ug/L	5.0	115	55	146	9.2	20	
Method: E1632AM									Analytical Run: SUB-H105850	
Lab ID: AS-ICV 25ppb-5/1/201		Initial Calibration Verification Standard							05/01/15 11:51	
Arsenic-III		24.9	ug/L	5.0	100	87.6	114			
Lab ID: AS-50.0-5/1/2015		Continuing Calibration Verification Standard							05/01/15 12:03	
Arsenic-III		50.2	ug/L	5.0	100	85	115			
Method: E1632AM									Batch: H_R105850	
Lab ID: AS-LFB 50ppb-5/1/20		Laboratory Fortified Blank				Run: SUB-H105850			05/01/15 12:27	
Arsenic-III		45.6	ug/L	5.0	91	55	146			
Lab ID: ICB		Method Blank				Run: SUB-H105850			05/01/15 12:39	
Arsenic-III		ND	ug/L	0.6						
Lab ID: C15040563-004E		Sample Matrix Spike				Run: SUB-H105850			05/01/15 13:03	
Arsenic-III		48.9	ug/L	5.0	93	55	146			
Lab ID: C15040563-004E		Sample Matrix Spike Duplicate				Run: SUB-H105850			05/01/15 13:15	
Arsenic-III		49.3	ug/L	5.0	94	55	146	0.8	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E1632AM**									Analytical Run: SUB-H105937	
Lab ID: **AS-ICV 25ppb-5/6/201**		Initial Calibration Verification Standard							05/06/15 11:02	
Arsenic-III		24.0	ug/L	5.0	96	87.6	114			
Lab ID: **AS-50.0-5/6/2015**		Continuing Calibration Verification Standard							05/06/15 11:14	
Arsenic-III		50.1	ug/L	5.0	100	85	115			
Method: **E1632AM**									Batch: H_R105937	
Lab ID: **AS-LFB 50ppb-5/6/20**		Laboratory Fortified Blank				Run: SUB-H105937			05/06/15 11:38	
Arsenic-III		49.8	ug/L	5.0	100	55	146			
Lab ID: **ICB**		Method Blank				Run: SUB-H105937			05/06/15 11:50	
Arsenic-III		ND	ug/L	0.6						
Lab ID: **C15040563-007E**		Sample Matrix Spike				Run: SUB-H105937			05/06/15 12:14	
Arsenic-III		50.2	ug/L	5.0	97	55	146			
Lab ID: **C15040563-007E**		Sample Matrix Spike Duplicate				Run: SUB-H105937			05/06/15 12:26	
Arsenic-III		50.8	ug/L	5.0	98	55	146	1.3	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP4-C_150421A	
Lab ID: ICV	10	Initial Calibration Verification Standard							04/21/15 13:25	
Aluminum		4.98	mg/L	0.10	100	95	105			
Beryllium		0.491	mg/L	0.010	98	95	105			
Cadmium		0.474	mg/L	0.010	95	95	105			
Calcium		49.7	mg/L	1.0	99	95	105			
Magnesium		49.9	mg/L	1.0	100	95	105			
Manganese		4.81	mg/L	0.010	96	95	105			
Molybdenum		0.971	mg/L	0.10	97	95	105			
Nickel		0.945	mg/L	0.050	95	95	105			
Sodium		50.5	mg/L	1.0	101	95	105			
Vanadium		0.975	mg/L	0.10	98	95	105			
Lab ID: ICSA	10	Interference Check Sample A							04/21/15 13:45	
Aluminum		471	mg/L	0.10	94	80	120			
Beryllium		0.000140	mg/L	0.010						
Cadmium		0.00363	mg/L	0.010						
Calcium		463	mg/L	1.0	93	80	120			
Magnesium		502	mg/L	1.0	100	80	120			
Manganese		-0.0188	mg/L	0.010						
Molybdenum		-0.00308	mg/L	0.10						
Nickel		0.00222	mg/L	0.050						
Sodium		-0.120	mg/L	1.0						
Vanadium		-0.000900	mg/L	0.10						
Lab ID: ICSAB	10	Interference Check Sample AB							04/21/15 13:49	
Aluminum		480	mg/L	0.10	96	80	120			
Beryllium		0.465	mg/L	0.010	93	80	120			
Cadmium		0.928	mg/L	0.010	93	80	120			
Calcium		465	mg/L	1.0	93	80	120			
Magnesium		507	mg/L	1.0	101	80	120			
Manganese		0.429	mg/L	0.010	86	80	120			
Molybdenum		-0.00410	mg/L	0.10						
Nickel		0.859	mg/L	0.050	86	80	120			
Sodium		-0.0124	mg/L	1.0						
Vanadium		0.505	mg/L	0.10	101	80	120			
Method: E200.7									Batch: 44448	
Lab ID: MB-44448	7	Method Blank				Run: ICP4-C_150421A			04/21/15 17:46	
Aluminum		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0003						
Cadmium		ND	mg/L	0.001						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.005						
Vanadium		ND	mg/L	0.003						

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: 44448
Lab ID: LCS3-44448	7	Laboratory Control Sample				Run: ICP4-C_150421A				04/21/15 18:02
Aluminum		2.54	mg/L	0.030	102	85	115			
Beryllium		0.247	mg/L	0.0010	99	85	115			
Cadmium		0.244	mg/L	0.0012	98	85	115			
Manganese		2.46	mg/L	0.0012	98	85	115			
Molybdenum		0.489	mg/L	0.0053	98	85	115			
Nickel		0.483	mg/L	0.0050	97	85	115			
Vanadium		0.496	mg/L	0.010	99	85	115			
Lab ID: C15040563-002CMS3	7	Sample Matrix Spike				Run: ICP4-C_150421A				04/21/15 18:14
Aluminum		20.3	mg/L	0.030		70	130			A
Beryllium		0.248	mg/L	0.0010	93	70	130			
Cadmium		0.234	mg/L	0.0025	90	70	130			
Manganese		14.0	mg/L	0.0023		70	130			A
Molybdenum		0.466	mg/L	0.011	93	70	130			
Nickel		1.36	mg/L	0.0090	89	70	130			
Vanadium		0.461	mg/L	0.010	92	70	130			
Lab ID: C15040563-002CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150421A				04/21/15 18:18
Aluminum		20.3	mg/L	0.030		70	130	0.2	20	A
Beryllium		0.247	mg/L	0.0010	93	70	130	0.2	20	
Cadmium		0.232	mg/L	0.0025	89	70	130	0.9	20	
Manganese		14.0	mg/L	0.0023		70	130	0.0	20	A
Molybdenum		0.468	mg/L	0.011	94	70	130	0.6	20	
Nickel		1.37	mg/L	0.0090	89	70	130	0.2	20	
Vanadium		0.458	mg/L	0.010	92	70	130	0.7	20	
Lab ID: C15040563-013CMS3	7	Sample Matrix Spike				Run: ICP4-C_150421A				04/21/15 20:15
Aluminum		2.60	mg/L	0.030	104	70	130			
Beryllium		0.247	mg/L	0.0010	99	70	130			
Cadmium		0.243	mg/L	0.0012	97	70	130			
Manganese		2.45	mg/L	0.0012	98	70	130			
Molybdenum		0.490	mg/L	0.0053	98	70	130			
Nickel		0.485	mg/L	0.0050	97	70	130			
Vanadium		0.495	mg/L	0.010	99	70	130			
Lab ID: C15040563-013CMSD	7	Sample Matrix Spike Duplicate				Run: ICP4-C_150421A				04/21/15 20:18
Aluminum		2.57	mg/L	0.030	103	70	130	1.3	20	
Beryllium		0.244	mg/L	0.0010	98	70	130	1.1	20	
Cadmium		0.242	mg/L	0.0012	97	70	130	0.4	20	
Manganese		2.43	mg/L	0.0012	97	70	130	0.9	20	
Molybdenum		0.495	mg/L	0.0053	99	70	130	1.0	20	
Nickel		0.480	mg/L	0.0050	96	70	130	1.1	20	
Vanadium		0.490	mg/L	0.010	98	70	130	1.1	20	
Method: E200.7										Batch: R198465

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R198465
Lab ID: MB-150421A	3	Method Blank				Run: ICP4-C_150421A				04/21/15 14:09
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Sodium		ND	mg/L	0.2						
Lab ID: LFB-150421A	3	Laboratory Fortified Blank				Run: ICP4-C_150421A				04/21/15 14:13
Calcium		47.3	mg/L	1.0	95	85	115			
Magnesium		46.7	mg/L	1.0	93	85	115			
Sodium		48.6	mg/L	1.0	97	85	115			
Lab ID: C15040563-002BMS2	3	Sample Matrix Spike				Run: ICP4-C_150421A				04/21/15 16:04
Calcium		670	mg/L	1.0	86	70	130			
Magnesium		757	mg/L	1.0	88	70	130			
Sodium		376	mg/L	1.2	90	70	130			
Lab ID: C15040563-002BMSD	3	Sample Matrix Spike Duplicate				Run: ICP4-C_150421A				04/21/15 16:08
Calcium		670	mg/L	1.0	86	70	130	0.1	20	
Magnesium		762	mg/L	1.0	90	70	130	0.7	20	
Sodium		382	mg/L	1.2	92	70	130	1.6	20	
Lab ID: C15040563-012BMS2	3	Sample Matrix Spike				Run: ICP4-C_150421A				04/21/15 17:31
Calcium		98.0	mg/L	1.0	96	70	130			
Magnesium		96.6	mg/L	1.0	95	70	130			
Sodium		118	mg/L	1.0	96	70	130			
Lab ID: C15040563-012BMSD	3	Sample Matrix Spike Duplicate				Run: ICP4-C_150421A				04/21/15 17:35
Calcium		97.5	mg/L	1.0	95	70	130	0.6	20	
Magnesium		96.1	mg/L	1.0	94	70	130	0.5	20	
Sodium		117	mg/L	1.0	95	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										*Analytical Run: ICP4-C_150422B*
Lab ID: ICV	4	Initial Calibration Verification Standard								04/22/15 10:29
Calcium		49.6	mg/L	1.0	99	95	105			
Magnesium		49.9	mg/L	1.0	100	95	105			
Potassium		49.4	mg/L	1.0	99	95	105			
Sodium		49.6	mg/L	1.0	99	95	105			
Lab ID: ICSA	4	Interference Check Sample A								04/22/15 10:48
Calcium		457	mg/L	1.0	91	80	120			
Magnesium		499	mg/L	1.0	100	80	120			
Potassium		0.00637	mg/L	1.0						
Sodium		-0.0780	mg/L	1.0						
Lab ID: ICSAB	4	Interference Check Sample AB								04/22/15 10:52
Calcium		452	mg/L	1.0	90	80	120			
Magnesium		492	mg/L	1.0	98	80	120			
Potassium		0.00158	mg/L	1.0						
Sodium		-0.0610	mg/L	1.0						
Method: E200.7										Batch: R198516
Lab ID: MB-150422A	4	Method Blank				Run: ICP4-C_150422B				04/22/15 11:12
Calcium		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.01						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.01						
Lab ID: LFB-150422A	4	Laboratory Fortified Blank				Run: ICP4-C_150422B				04/22/15 11:16
Calcium		46.5	mg/L	1.0	93	85	115			
Magnesium		46.2	mg/L	1.0	92	85	115			
Potassium		45.7	mg/L	1.0	91	85	115			
Sodium		46.0	mg/L	1.0	92	85	115			
Lab ID: C15040563-004BMS2	4	Sample Matrix Spike				Run: ICP4-C_150422B				04/22/15 15:37
Calcium		675	mg/L	1.0	88	70	130			
Magnesium		695	mg/L	1.0	92	70	130			
Potassium		244	mg/L	1.0	91	70	130			
Sodium		340	mg/L	1.2	92	70	130			
Lab ID: C15040563-004BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150422B				04/22/15 15:40
Calcium		674	mg/L	1.0	87	70	130	0.2	20	
Magnesium		695	mg/L	1.0	92	70	130	0.0	20	
Potassium		249	mg/L	1.0	93	70	130	2.2	20	
Sodium		345	mg/L	1.2	94	70	130	1.4	20	
Lab ID: C15040563-013BMS2	4	Sample Matrix Spike				Run: ICP4-C_150422B				04/22/15 16:32
Calcium		97.7	mg/L	1.0	96	70	130			
Magnesium		96.5	mg/L	1.0	95	70	130			
Potassium		95.9	mg/L	1.0	94	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R198516
Lab ID: C15040563-013BMS2	4	Sample Matrix Spike				Run: ICP4-C_150422B				04/22/15 16:32
Sodium		115	mg/L	1.0	93	70	130			
Lab ID: C15040563-013BMSD	4	Sample Matrix Spike Duplicate				Run: ICP4-C_150422B				04/22/15 17:15
Calcium		98.5	mg/L	1.0	97	70	130	0.8	20	
Magnesium		96.4	mg/L	1.0	94	70	130	0.1	20	
Potassium		99.1	mg/L	1.0	97	70	130	3.2	20	
Sodium		119	mg/L	1.0	97	70	130	3.4	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS2-C_150421A	
Lab ID: ICV	5	Initial Calibration Verification Standard							04/21/15 13:44	
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Cobalt		0.0515	mg/L	0.0010	103	90	110			
Lead		0.0496	mg/L	0.0010	99	90	110			
Molybdenum		0.0495	mg/L	0.0010	99	90	110			
Uranium		0.0495	mg/L	0.00030	99	90	110			
Method: E200.8									Batch: 44448	
Lab ID: MB-44448	5	Method Blank				Run: ICPMS2-C_150421A			04/21/15 23:17	
Cadmium		2E-05	mg/L	2E-05						
Cobalt		1E-05	mg/L	1E-05						
Lead		ND	mg/L	3E-05						
Molybdenum		ND	mg/L	8E-05						
Uranium		ND	mg/L	9E-06						
Lab ID: LCS3-44448	5	Laboratory Control Sample				Run: ICPMS2-C_150421A			04/21/15 23:20	
Cadmium		0.250	mg/L	0.0010	100	85	115			
Cobalt		0.490	mg/L	0.0050	98	85	115			
Lead		0.512	mg/L	0.0010	102	85	115			
Molybdenum		0.496	mg/L	0.0010	99	85	115			
Uranium		0.529	mg/L	0.00030	106	85	115			
Lab ID: C15040563-002CMS3	5	Sample Matrix Spike				Run: ICPMS2-C_150421A			04/21/15 23:41	
Cadmium		0.260	mg/L	0.0010	100	70	130			
Cobalt		1.41	mg/L	0.0050	100	70	130			
Lead		0.535	mg/L	0.0010	102	70	130			
Molybdenum		0.500	mg/L	0.0010	100	70	130			
Uranium		0.796	mg/L	0.00030	106	70	130			
Lab ID: C15040563-002CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150421A			04/21/15 23:43	
Cadmium		0.260	mg/L	0.0010	100	70	130	0.3	20	
Cobalt		1.40	mg/L	0.0050	97	70	130	0.9	20	
Lead		0.533	mg/L	0.0010	102	70	130	0.4	20	
Molybdenum		0.511	mg/L	0.0010	102	70	130	2.1	20	
Uranium		0.782	mg/L	0.00030	103	70	130	1.8	20	
Lab ID: C15040563-013CMS3	5	Sample Matrix Spike				Run: ICPMS2-C_150421A			04/22/15 00:33	
Cadmium		0.253	mg/L	0.0010	101	70	130			
Cobalt		0.488	mg/L	0.0050	98	70	130			
Lead		0.511	mg/L	0.0010	102	70	130			
Molybdenum		0.500	mg/L	0.0010	100	70	130			
Uranium		0.548	mg/L	0.00030	110	70	130			
Lab ID: C15040563-013CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150421A			04/22/15 00:35	
Cadmium		0.253	mg/L	0.0010	101	70	130	0.1	20	
Cobalt		0.503	mg/L	0.0050	101	70	130	3.0	20	
Lead		0.512	mg/L	0.0010	102	70	130	0.2	20	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 44448
Lab ID: C15040563-013CMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS2-C_150421A				04/22/15 00:35
Molybdenum		0.508	mg/L	0.0010	102	70	130	1.5	20	
Uranium		0.550	mg/L	0.00030	110	70	130	0.5	20	
Method: E200.8										Analytical Run: ICPMS4-C_150422A
Lab ID: ICV	2	Initial Calibration Verification Standard								04/22/15 15:51
Cadmium		0.0503	mg/L	0.0010	101	90	110			
Lead		0.0471	mg/L	0.0010	94	90	110			
Method: E200.8										Batch: 44448
Lab ID: MB-44448	2	Method Blank				Run: ICPMS4-C_150422A				04/23/15 02:50
Cadmium		ND	mg/L	2E-05						
Lead		4E-05	mg/L	4E-05						
Lab ID: LCS3-44448	2	Laboratory Control Sample				Run: ICPMS4-C_150422A				04/23/15 02:55
Cadmium		0.262	mg/L	0.0010	105	85	115			
Lead		0.493	mg/L	0.0010	99	85	115			
Lab ID: C15040563-002CMS3	2	Sample Matrix Spike				Run: ICPMS4-C_150422A				04/23/15 03:31
Cadmium		0.249	mg/L	0.0010	97	70	130			
Lead		0.533	mg/L	0.0010	102	70	130			
Lab ID: C15040563-002CMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS4-C_150422A				04/23/15 03:36
Cadmium		0.257	mg/L	0.0010	100	70	130	2.9	20	
Lead		0.556	mg/L	0.0010	107	70	130	4.1	20	
Method: E200.8										Analytical Run: ICPMS4-C_150428A
Lab ID: ICV	2	Initial Calibration Verification Standard								04/28/15 14:27
Cobalt		0.0494	mg/L	0.0010	99	90	110			
Uranium		0.0490	mg/L	0.00030	98	90	110			
Method: E200.8										Batch: 44448
Lab ID: MB-44448	2	Method Blank				Run: ICPMS4-C_150428A				04/28/15 18:31
Cobalt		ND	mg/L	1E-05						
Uranium		0.002	mg/L	4E-05						

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC1-C_150421A	
Lab ID: ICV	2	Initial Calibration Verification Standard							04/20/15 19:35	
Chloride		10.1	mg/L	1.0	101	90	110			
Sulfate		40.2	mg/L	1.0	100	90	110			
Lab ID: CCV-042015-4	2	Continuing Calibration Verification Standard							04/21/15 17:37	
Chloride		9.95	mg/L	1.0	100	90	110			
Sulfate		39.9	mg/L	1.0	100	90	110			
Lab ID: CCV-042015-5	2	Continuing Calibration Verification Standard							04/21/15 21:41	
Chloride		9.87	mg/L	1.0	99	90	110			
Sulfate		39.8	mg/L	1.0	100	90	110			
Lab ID: CCV-042015-6	2	Continuing Calibration Verification Standard							04/22/15 02:02	
Chloride		9.91	mg/L	1.0	99	90	110			
Sulfate		39.9	mg/L	1.0	100	90	110			
Method: E300.0									Batch: R198471	
Lab ID: ICB	2	Method Blank				Run: IC1-C_150421A			04/20/15 19:52	
Chloride		ND	mg/L	0.04						
Sulfate		0.2	mg/L	0.1						
Lab ID: LFB-042015-1	2	Laboratory Fortified Blank				Run: IC1-C_150421A			04/20/15 20:09	
Chloride		10.5	mg/L	1.0	105	90	110			
Sulfate		41.7	mg/L	1.0	104	90	110			
Lab ID: C15040555-031AMS	2	Sample Matrix Spike				Run: IC1-C_150421A			04/21/15 18:29	
Chloride		22.1	mg/L	1.0	116	90	110			S
Sulfate		165	mg/L	1.0	105	90	110			
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040555-031AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150421A			04/21/15 18:47	
Chloride		22.1	mg/L	1.0	116	90	110	0.0	20	S
Sulfate		165	mg/L	1.0	105	90	110	0.0	20	
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040563-008AMS	2	Sample Matrix Spike				Run: IC1-C_150421A			04/21/15 22:51	
Chloride		167	mg/L	1.0	114	90	110			S
Sulfate		3050	mg/L	4.2		90	110			A
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040563-008AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150421A			04/21/15 23:08	
Chloride		167	mg/L	1.0	114	90	110	0.1	20	S
Sulfate		3030	mg/L	4.2		90	110	0.5	20	A
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040563-018AMS	2	Sample Matrix Spike				Run: IC1-C_150421A			04/22/15 02:55	
Chloride		129	mg/L	1.0	109	90	110			
Sulfate		2780	mg/L	4.2		90	110			A
Lab ID: C15040563-018AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150421A			04/22/15 03:12	
Chloride		130	mg/L	1.0	110	90	110	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										Batch: R198471
Lab ID: C15040563-018AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_150421A				04/22/15 03:12
Sulfate		2750	mg/L	4.2		90	110	1.4	20	A
Method: E300.0										Analytical Run: IC2-C_150427A
Lab ID: ICV	2	Initial Calibration Verification Standard								04/27/15 15:00
Chloride		10.0	mg/L	1.0	100	90	110			
Sulfate		39.4	mg/L	1.0	98	90	110			
Lab ID: CCV-042715-1	2	Continuing Calibration Verification Standard								04/27/15 15:55
Chloride		9.54	mg/L	1.0	95	90	110			
Sulfate		39.2	mg/L	1.0	98	90	110			
Method: E300.0										Batch: R198712
Lab ID: ICB	2	Method Blank				Run: IC2-C_150427A				04/27/15 15:18
Chloride		ND	mg/L	0.01						
Sulfate		0.2	mg/L	0.03						
Lab ID: LFB-042715-1	2	Laboratory Fortified Blank				Run: IC2-C_150427A				04/27/15 15:37
Chloride		10.3	mg/L	1.0	103	90	110			
Sulfate		41.9	mg/L	1.0	104	90	110			
Lab ID: C15040621-006AMS	2	Sample Matrix Spike				Run: IC2-C_150427A				04/27/15 18:23
Chloride		13.3	mg/L	1.0	112	90	110			S
Sulfate		52.9	mg/L	1.0	105	90	110			
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										
Lab ID: C15040621-006AMSD	2	Sample Matrix Spike Duplicate				Run: IC2-C_150427A				04/27/15 18:41
Chloride		13.6	mg/L	1.0	114	90	110	1.8	20	S
Sulfate		54.0	mg/L	1.0	108	90	110	1.9	20	
- Matrix spike recoveries outside the acceptance range are considered matrix-related.										

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2									Analytical Run: TECHNICON_150420A	
Lab ID: CCV-28	Continuing Calibration Verification Standard								04/20/15 12:46	
Nitrogen, Nitrate+Nitrite as N		0.999	mg/L	0.10	100	90	110			
Lab ID: CCV-43	Continuing Calibration Verification Standard								04/20/15 13:23	
Nitrogen, Nitrate+Nitrite as N		1.05	mg/L	0.10	105	90	110			
Lab ID: CCV-65	Continuing Calibration Verification Standard								04/20/15 14:18	
Nitrogen, Nitrate+Nitrite as N		0.960	mg/L	0.10	96	90	110			
Lab ID: CCV-81	Continuing Calibration Verification Standard								04/20/15 14:58	
Nitrogen, Nitrate+Nitrite as N		1.01	mg/L	0.10	101	90	110			
Method: E353.2									Batch: R198392	
Lab ID: MBLK-1	Method Blank					Run: TECHNICON_150420A			04/20/15 11:38	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: LFB-3	Laboratory Fortified Blank					Run: TECHNICON_150420A			04/20/15 11:43	
Nitrogen, Nitrate+Nitrite as N		1.96	mg/L	0.10	100	90	110			
Lab ID: C15040563-013DMS	Sample Matrix Spike					Run: TECHNICON_150420A			04/20/15 12:53	
Nitrogen, Nitrate+Nitrite as N		1.93	mg/L	0.10	98	90	110			
Lab ID: C15040563-013DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150420A			04/20/15 12:55	
Nitrogen, Nitrate+Nitrite as N		1.92	mg/L	0.10	97	90	110	0.5	10	
Lab ID: C15040563-012DMS	Sample Matrix Spike					Run: TECHNICON_150420A			04/20/15 14:53	
Nitrogen, Nitrate+Nitrite as N		1.77	mg/L	0.10	90	90	110			
Lab ID: C15040563-012DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150420A			04/20/15 14:56	
Nitrogen, Nitrate+Nitrite as N		1.78	mg/L	0.10	91	90	110	0.6	10	
Lab ID: C15040563-013DMS	Sample Matrix Spike					Run: TECHNICON_150420A			04/20/15 15:11	
Nitrogen, Nitrate+Nitrite as N		1.82	mg/L	0.10	93	90	110			
Lab ID: C15040563-013DMSD	Sample Matrix Spike Duplicate					Run: TECHNICON_150420A			04/20/15 15:13	
Nitrogen, Nitrate+Nitrite as N		1.85	mg/L	0.10	94	90	110	1.6	10	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624									Analytical Run: R198425	
Lab ID: 20-Apr-15_CCV_3	9	Continuing Calibration Verification Standard							04/20/15 11:27	
Bromodichloromethane		9.96	ug/L	1.0	100	70	130			
Bromoform		9.56	ug/L	1.0	96	70	130			
Chlorodibromomethane		9.40	ug/L	1.0	94	70	130			
Chloroform		9.00	ug/L	1.0	90	70	130			
Trihalomethanes, Total		37.9	ug/L	1.0	95	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	105	70	130			
Surr: Dibromofluoromethane				1.0	101	70	130			
Surr: p-Bromofluorobenzene				1.0	104	70	130			
Surr: Toluene-d8				1.0	109	70	130			
Lab ID: 20-Apr-15_CCV_20	9	Continuing Calibration Verification Standard							04/20/15 21:30	
Bromodichloromethane		10.6	ug/L	1.0	106	70	130			
Bromoform		9.96	ug/L	1.0	100	70	130			
Chlorodibromomethane		10.4	ug/L	1.0	104	70	130			
Chloroform		10.9	ug/L	1.0	109	70	130			
Trihalomethanes, Total		41.8	ug/L	1.0	105	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	117	70	130			
Surr: p-Bromofluorobenzene				1.0	104	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Method: E624									Batch: R198425	
Lab ID: 20-Apr-15_LCS_4	9	Laboratory Control Sample				Run: 5975VOC1_150420A			04/20/15 12:02	
Bromodichloromethane		10.1	ug/L	1.0	101	60	130			
Bromoform		9.84	ug/L	1.0	98	60	142			
Chlorodibromomethane		9.80	ug/L	1.0	98	67	134			
Chloroform		8.84	ug/L	1.0	88	56	135			
Trihalomethanes, Total		38.6	ug/L	1.0	96	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	98	43	142			
Surr: p-Bromofluorobenzene				1.0	105	70	130			
Surr: Toluene-d8				1.0	107	70	130			
Lab ID: 20-Apr-15_MBLK_6	9	Method Blank				Run: 5975VOC1_150420A			04/20/15 13:12	
Bromodichloromethane		ND	ug/L	1.0						
Bromoform		ND	ug/L	1.0						
Chlorodibromomethane		ND	ug/L	1.0						
Chloroform		ND	ug/L	1.0						
Trihalomethanes, Total		ND	ug/L	1.0						
Surr: 1,2-Dichlorobenzene-d4				1.0	110	73.7	126			
Surr: Dibromofluoromethane				1.0	104	64.4	131			
Surr: p-Bromofluorobenzene				1.0	112	67.1	133			
Surr: Toluene-d8				1.0	100	79.7	125			

Qualifiers:

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ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E624										Batch: R198425
Lab ID: C15040563-001HMS	9	Sample Matrix Spike				Run: 5975VOC1_150420A			04/20/15 19:45	
Bromodichloromethane		119	ug/L	5.0	119	60	130			
Bromoform		108	ug/L	5.0	108	60	142			
Chlorodibromomethane		110	ug/L	5.0	110	67	134			
Chloroform		197	ug/L	5.0	119	56	135			
Trihalomethanes, Total		534	ug/L	5.0	114	70	130			
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	117	43	142			
Surr: p-Bromofluorobenzene				1.0	104	70	130			
Surr: Toluene-d8				1.0	106	70	130			
Lab ID: C15040563-001HMSD	9	Sample Matrix Spike Duplicate				Run: 5975VOC1_150420A			04/20/15 20:20	
Bromodichloromethane		117	ug/L	5.0	117	60	130	2.0	20	
Bromoform		109	ug/L	5.0	109	60	142	0.7	20	
Chlorodibromomethane		110	ug/L	5.0	110	67	134	0.4	20	
Chloroform		185	ug/L	5.0	107	56	135	6.3	20	
Trihalomethanes, Total		520	ug/L	5.0	111	70	130	2.7	20	
Surr: 1,2-Dichlorobenzene-d4				1.0	104	70	130			
Surr: Dibromofluoromethane				1.0	113	43	142			
Surr: p-Bromofluorobenzene				1.0	103	70	130			
Surr: Toluene-d8				1.0	104	70	130			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E900.1**										Batch: GA-0876
Lab ID: **MB-GA-0873**	3	Method Blank				Run: TENNELEC-3_150422A			04/22/15 13:31	
Gross Alpha minus Rn & U		0.6	pCi/L							U
Gross Alpha minus Rn & U Precision (±)		0.8	pCi/L							
Gross Alpha minus Rn & U MDC		1	pCi/L							
Lab ID: **LCS 1**		Laboratory Control Sample				Run: TENNELEC-3_150422A			04/22/15 13:31	
Gross Alpha minus Rn & U		34.6	pCi/L		99	80	120			
Lab ID: **LCS 2**		Laboratory Control Sample				Run: TENNELEC-3_150422A			04/22/15 13:31	
Gross Alpha minus Rn & U		31.9	pCi/L		91	80	120			
Lab ID: **LCS 3**		Laboratory Control Sample				Run: TENNELEC-3_150422A			04/22/15 13:31	
Gross Alpha minus Rn & U		32.7	pCi/L		94	80	120			
Lab ID: **LCS-4**		Laboratory Control Sample				Run: TENNELEC-3_150422A			04/22/15 13:31	
Gross Alpha minus Rn & U		31.9	pCi/L		91	80	120			
Lab ID: **C15040552-001DMS**		Sample Matrix Spike				Run: TENNELEC-3_150422A			04/22/15 11:52	
Gross Alpha minus Rn & U		72.8	pCi/L		94	70	130			
Lab ID: **C15040552-001DMSD**		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150422A			04/22/15 11:51	
Gross Alpha minus Rn & U		66.8	pCi/L		85	70	130	8.6	52.4	

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QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: RA226-7633
Lab ID: MB-RA226-7633	3	Method Blank				Run: BERTHOLD 770-1_150423A				05/04/15 08:12
Radium 226		-0.03	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Lab ID: LCS-RA226-7633		Laboratory Control Sample				Run: BERTHOLD 770-1_150423A				05/04/15 08:12
Radium 226		9.4	pCi/L		92	80	120			
Lab ID: C15040563-001GMS		Sample Matrix Spike				Run: BERTHOLD 770-1_150423A				05/04/15 08:12
Radium 226		27	pCi/L		77	70	130			
Lab ID: C15040563-001GMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_150423A				05/04/15 08:12
Radium 226		27	pCi/L		78	70	130	0.2	48.7	

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QA/QC Summary Report

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Revised Date: 06/04/15
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Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: RA-TH-ISO-2236
Lab ID: LCS-RA-TH-ISO-2236		Laboratory Control Sample				Run: ALPHANALYST_150505A				05/07/15 15:04
Thorium 230		6.5	pCi/L		97	80	120			
Lab ID: C15050035-002DMS		Sample Matrix Spike				Run: ALPHANALYST_150505A				05/07/15 15:04
Thorium 230		14	pCi/L		110	70	130			
Lab ID: C15050035-002DMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150505A				05/07/15 15:04
Thorium 230		14	pCi/L		103	70	130	6.0	48	
Lab ID: MB-RA-TH-ISO-2236	3	Method Blank				Run: ALPHANALYST_150505A				05/08/15 09:59
Thorium 230		0.1	pCi/L							U
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.3	pCi/L							
Method: E908.0										Batch: R199388
Lab ID: LCS5-44544		Laboratory Control Sample				Run: ALPHANALYST_150511B				05/14/15 09:34
Thorium 230		5.4	pCi/g-dry		94	80	120			
Lab ID: C15040590-001BMS		Sample Matrix Spike				Run: ALPHANALYST_150511B				05/14/15 09:34
Thorium 230		8.0	pCi/g-dry		118	70	130			
Lab ID: C15040590-001BMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150511B				05/14/15 09:34
Thorium 230		8.0	pCi/g-dry		117	70	130	0.7	48	
Lab ID: MB-44544	3	Method Blank				Run: ALPHANALYST_150511B				05/14/15 09:34
Thorium 230		0.004	pCi/g-dry							U
Thorium 230 precision (±)		0.007	pCi/g-dry							
Thorium 230 MDC		0.01	pCi/g-dry							
Lab ID: MB-44598	3	Method Blank				Run: ALPHANALYST_150511B				05/14/15 09:34
Thorium 230		0.1	pCi/L							U
Thorium 230 precision (±)		0.2	pCi/L							
Thorium 230 MDC		0.4	pCi/L							
Method: E908.0										Batch: RA-TH-ISO-2237
Lab ID: LCS-RA-TH-ISO-2237		Laboratory Control Sample				Run: EGG-ORTEC_150506A				05/11/15 17:38
Thorium 230		7.5	pCi/L		111	80	120			
Lab ID: TAPWATER-MS		Sample Matrix Spike				Run: EGG-ORTEC_150506A				05/11/15 17:38
Thorium 230		15.2	pCi/L		113	70	130			
Lab ID: TAPWATER-MSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_150506A				05/11/15 17:38
Thorium 230		13.0	pCi/L		97	70	130	15	48	
Lab ID: MB-RA-TH-ISO-2237	3	Method Blank				Run: EGG-ORTEC_150506A				05/12/15 17:04
Thorium 230		0.3	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.2	pCi/L							

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Revised Date: 06/04/15
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Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_PB-210-0548
Lab ID: MB-PB-210-0548	3	Method Blank				Run: SUB-T62644				04/30/15 02:39
Lead 210		-0.7	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0548		Laboratory Control Sample				Run: SUB-T62644				04/30/15 04:22
Lead 210		21	pCi/L		104	80	120			
Lab ID: C15040552-001GMS		Sample Matrix Spike				Run: SUB-T62644				04/30/15 07:16
Lead 210		37	pCi/L		82	70	130			
Lab ID: C15040552-001GMSD		Sample Matrix Spike Duplicate				Run: SUB-T62644				04/30/15 08:39
Lead 210		36	pCi/L		80	70	130	3.1	44	
Lab ID: MB-PB-210-0548	3	Method Blank				Run: SUB-T62644				04/30/15 02:39
Lead 210		-0.7	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0548		Laboratory Control Sample				Run: SUB-T62644				04/30/15 04:22
Lead 210		21	pCi/L		104	80	120			
Lab ID: T15040093-001GMS		Sample Matrix Spike				Run: SUB-T62644				04/30/15 07:16
Lead 210		37	pCi/L		82	70	130			
Lab ID: T15040093-001GMSD		Sample Matrix Spike Duplicate				Run: SUB-T62644				04/30/15 08:39
Lead 210		36	pCi/L		80	70	130	3.1	44	
Method: E909.0										Batch: T_PB-210-0551
Lab ID: MB-PB-210-0551	3	Method Blank				Run: SUB-T62731				05/05/15 06:39
Lead 210		-0.5	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Lab ID: LCS-PB-210-0551		Laboratory Control Sample				Run: SUB-T62731				05/05/15 08:22
Lead 210		21	pCi/L		103	80	120			
Lab ID: C15040563-009FMS		Sample Matrix Spike				Run: SUB-T62731				05/05/15 11:28
Lead 210		49	pCi/L		112	70	130			
Lab ID: C15040563-009FMSD		Sample Matrix Spike Duplicate				Run: SUB-T62731				05/05/15 12:40
Lead 210		55	pCi/L		126	70	130	11	43.6	

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QA/QC Summary Report

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Revised Date: 06/04/15
Report Date: 05/20/15
Work Order: C15040563

Client: United Nuclear Corporation
Project: Zone-3

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **RA-05**										Batch: RA228-4919
Lab ID: **LCS-228-RA226-7633**		Laboratory Control Sample				Run: TENNELEC-3_150423C				04/28/15 12:27
Radium 228		5.7	pCi/L		88	80	120			
Lab ID: **MB-RA226-7633**	3	Method Blank				Run: TENNELEC-3_150423C				04/28/15 12:27
Radium 228		0.2	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Lab ID: **C15040563-002GMS**		Sample Matrix Spike				Run: TENNELEC-3_150423C				04/28/15 12:27
Radium 228		21	pCi/L		119	70	130			
Lab ID: **C15040563-002GMSD**		Sample Matrix Spike Duplicate				Run: TENNELEC-3_150423C				04/28/15 12:27
Radium 228		20	pCi/L		110	70	130	5.7	51.6	

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